



Research Article

**An Appraisal of Knowledge, Attitude and Awareness of Lassa Fever among Community Residents
in Owo Local Government Area of Ondo State, Nigeria**

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Abstract

Lassa fever is a viral haemorrhagic illness caused by the Lassa virus that belong to the family Arenaviridae which is transmitted from local rodents to human population in Nigeria. The high case fatality rate and continuous transmissions of Lassa fever in Ondo State particularly in Owo Local Government, inspite of ongoing awareness campaigns on preventive practices and several public interventions have elicited concerns of the governments, health practitioners, community leaders and other critical stakeholders. Thus, this study aims at appraising the knowledge, attitude and awareness of Lassa fever among residents in Owo local government of Ondo State. A descriptive cross- sectional research design was used for the purpose of this study relying on health belief theory as a theoretical fulcrum. The samples for this study consist of 368 male and female residents selected from eleven political wards in Owo LGA using multi-stage sampling technique. Data were collected through self-administered questionnaire and the results were analyzed using both descriptive (frequency, tables, percentage) and inferential statistics (chi-square) with the aid of Statistical Package for the social sciences (SPSS). The findings showed that majority of the respondents have good knowledge of Lassa fever (58.49%). However, majority have poor attitude and low level of awareness about the disease (60.9%). The study further showed that there is significant relationship between respondents knowledge and burden of Lassa fever ($r= 10.22$, $p= 0.001$). However, There is no significant relationship between respondents level of awareness of Lassa fever epidemic and its burden ($r=9.20$, $p=0.778$). The study concluded that there is a need for increased awareness among the residents on maintenance of clean environment and personal hygiene in order to checkmate outbreak of Lassa fever epidemic within the community. Therefore, it is recommended that government at all levels should create more effective strategies and advocacy on clean and safe environment to prevent the spread of Lassa fever particularly in the endemic communities in the local government area.

Keywords: Awareness, Epidemic, Hemorrhagic Virus, Knowledge, Lassa fever

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Introduction

According to the World Health Organisation (WHO), (2018) fact sheet, LF is an acute viral haemorrhagic illness caused by Lassa virus; a member of the arenaviridae family of the viruses. It was discovered in 1950s but the virus was not identified until 1969, when two missionary nurses died from it in the town of Lassa in North-eastern part of Nigeria. Lassa fever is a persistent global public threat over the past 5 years, it has infected over 300,000 people and caused over 5,000 deaths annually. Viral haemorrhagic fever like Lassa fever are among the most feared diseases due to their high case fatality rates, severe clinical presentations and ease of transmission (Ajayi, Nwigbe and Azougu, 2018). The primary mode of transmission is from rodents to human beings through contact with food or household items that are contaminated with rodent's droppings; faeces and / or urine. The Virus has the capacity for person-to-person spread, Out of every 100 people who get infected, only 20 have symptoms with the incubation period of 6 to 21 days. (Fatiregun, and Isere, 2019). This disease affects all categories of people and causes severe health complications like organ failure and deaths.

Human-to-human transmission can occur through contact with the body fluids of infected persons; therefore, healthcare workers (HCWs) are at high risk of infection when the standard precautions for infection prevention and control are inadequate (CDCP, 2015). The incubation period of the disease is 3–21 days. The clinical manifestations of the disease is nonspecific and includes, fever, fatigue, hemorrhaging, gastrointestinal symptoms (vomiting, diarrhea, and stomachache), respiratory symptoms (cough, chest pain, and dyspnea), and neurologic symptoms (disorientation, seizures, and unconsciousness) (NCDC, 2023). The observed case-fatality rate among patients hospitalized for severe Lassa fever is 15%–50%. However, 80% of infections are considered to cause mild or no symptoms in humans and are undiagnosed (Snell, 2001); (WHO, 2023).

Lassa fever is endemic in parts of West Africa including Sierra Leone, Liberia, Guinea and Nigeria where it has the potential of causing thousands of deaths even after recovered because the Virus remains in the body fluids including semen (WHO, 2018). It is on the above premise that this study aims to appraise the knowledge, attitude and

awareness of Lassa fever among community residents of Owo local Government Area of Ondo State.

This study is guided by the following research questions.

1. Does the respondents' knowledge of Lassa fever have influence on the incidence?
2. Does the attitude of the respondents influence the incidence of Lassa fever?
3. Does the level of awareness among the respondents affect the incidence of Lassa fever?

Significance of the Study

This study is expected to assist the governments in its awareness strategies and advocacy programme. The community residents will be better equipped with information about Lassa fever and the study will also contribute to the body of knowledge about the disease burden.

Literature Review

History of Lassa Fever:

The earliest cases of Lassa fever were thought to have occurred between 1920 and 1950 in Nigeria, Sierra Leone and control Central African countries following the death of two missionary nurses in 1969, the disease was recognised and named Lassa fever in recognition of Lassa Town located in Bornu state, North eastern Nigeria, where the index case of the disease was first documented (Ilesanmi et al., 2015; Isere et al., 2022). According to the Lassa fever resources (2023) subsequent outbreaks occurred in Sierra Leone and Liberia in 1972. This led to the establishment of a Research Centre for Lassa Fever in Sierra Leone in the mid- 1970s but the centre was closed down during the civil war when the mission hospital was overtaken by the rebels the ravaging war forced the international researchers to relocate to the neighbouring Guinea where the disease was also endemic. The political instability and civil war contributed to the number of serious outbreaks of Lassa fever epidemics in the 1990s and early 2000s (Ilesanmi et al., 2015). In the same vein, Lassa fever has accounted for outbreaks of acute haemorrhagic fever in Nigeria since the discovery of the virus in Lassa town, North-eastern Nigeria in 1969. There have been outbreaks of Lassa fever every year in many states in Nigeria that lasted for long periods. The disease is commonly found in rural communities where over 70% poverty prevails and standards of living are low according to Nigeria Center for Disease Control (2023).

In 2001, Irrua Specialist Teaching Hospital was declared as a centre of excellence for the central and management of Lassa fever in Nigeria. To ensure comprehensive response to

Lassa fever epidermis, the destitute of Lassa Fever Control of Irrua was inaugurated in 2007. Similarly, the Nigeria centre for diseases control (NCDC) was established in 2011 in response to public health emergencies and to improve epidemic preparedness. This is the head agency in the fight against Lassa fever in Nigeria. The epidemiological trends of Lassa fever in Nigeria from 2015-2021 revealed that the predominant age group infected was 21 to 40 years with a male to female ratio of 1:0.8. Showing an upward trend in Nigeria and other West African countries (John, Ego and Udensi, 2021)

Prevalence of Lassa Fever in Nigeria

Rodents, particularly *Mastomys natalensis*, are considered the natural hosts of the Lassa Fever virus. The analysis of the epidemiologic and clinical aspects of the Lassa fever outbreak that occurred in Nigeria. A total of 1,893 cases were reported; 423 were laboratory-confirmed cases, among which 106 deaths were recorded (case-fatality rate 25.1%). Among all confirmed cases, 37 occurred in healthcare workers. The secondary attack rate among 5,001 contacts was 0.56%. Most (80.6%) confirmed cases were reported from 3 states (Edo, Ondo, and Ebonyi). Fatal outcomes were significantly associated with being elderly; no administration of ribavirin; and the presence of a cough, hemorrhage and unconsciousness (Fisher-Hoch, 2005).

There is no age, gender or racial predilection (Asogun, 2012); (WHO, 2023). Outbreaks in endemic regions are promoted by factors that lead to increased rodent-man contact such as civil unrest, which led to mass movement of people and rapid development of human settlements, overcrowding, poor sanitation, deforestation, rodent hunting, bush burning, and agricultural developments such as rice cultivation that provide food supplies for rodents according to Lassa fever situation report in 2021. Rural dwellers in Nigeria are at risk of Lassa fever because of proximity to animal reservoir, open construction of African villages, the practice of drying grains by road sides or outside homes and unprotected grain storage within homes according to Lassa fever resources (2023) and NCDC (2023). All these factors are known to facilitate increased rodent-man contact or contamination of food sources by infected rodent secretions. Hospital workers may be at risk of Lassa fever if proper barrier nursing and infection control practices are not maintained.

In Nigeria, laboratory-confirmed LF patients are treated in isolation units, according to national guidelines, to prevent community and nosocomial human-to-human infections. The country has 3 main LF treatment centers: the Irrua Specialist Teaching Hospital (Edo State), the Federal Medical Centre Owo (Ondo State), and the Federal Teaching Hospital Abakaliki (Ebonyi State). Isolation units are also located in tertiary-care centers in other states. Ribavirin has been shown to reduce the case-fatality rate for Lassa fever; Nigeria national guidelines recommend that parenteral ribavirin be administered over a 10-day

period for patients with confirmed Lassa fever. In 2016, Nigeria reported 273 suspected cases and 149 deaths (case fatality rate – 55%) from 23 states. According to Nigeria Centre for Disease Control (NCDC and WHO 2023), during the 2017 outbreak, 19 out of 36 States reported at least one confirmed case each. NCDC situation report for Epi-week, in January 2018, said from 1st to 25th January 2018, a total of 297 suspected cases, and 22 deaths had been reported from 13 active States (Edo, Ondo, Bauchi, Nasarawa, Ebonyi, Anambra, Benue, Kogi, Imo, Plateau, Lagos, Taraba, and Delta). Since the beginning of 2018, 80 cases had been classified as follows: 77 confirmed cases, 3 probable cases with 21 deaths (18 in confirmed, and 3 in probable cases). In the reporting week 4 (January 22–28, 2018), 15 new confirmed cases and two deaths were recorded from five States Edo (6), Ondo (4), Delta (1), Imo (1), and Taraba (3). Case fatality rate was confirmed and probable cases were 27.6% and 7.4% for all cases (including probable, confirmed, and suspected).

According to the Health Agency, as at January 28, 2018, 10 out of the 77 confirmed cases were health-care workers from four states, Ebonyi-7, Nasarawa-1, Kogi-1, and Benue-1, out of which 4 are now deceased. In Nigeria, the Lassa fever situation initially improved with the implementation of Lassa virus polymerase chain reaction testing at a research laboratory of the University of Lagos, which facilitated retrospective laboratory confirmation of Lassa fever cases in various parts of the country. However, none of the hospitals is in the endemic areas. According to world Health Organisation fact sheet on Lassa fever in Nigeria, Nigeria is currently experiencing a large outbreak of Lassa fever, with 4,702 suspected cases, five probable cases and 877 confirmed cases between epidemiological weeks in April, 2023. Among the confirmed cases, there have been 152 deaths (CFR 17%). This is a 20% increase in confirmed cases in comparison with those reported during the same period in 2022.

Cases have been reported from 101 local government areas (L.G.A) in 26 out of 36 states and Federal Capital Territory (FCT). A high proportion of confirmed cases (72%) are concentrated in three states, Ondo (32%), Edo (29%) and Bauchi (11%). Laboratory confirmed cases have been reported in states like Adamawa, Benue, Crossriver, Taraba, Oyo and Niger. Nigeria still has the capacity to perform Lassa virus tests. Case management is thus mainly based on nonspecific clinical criteria, and in the worst cases, health-care workers became infected while they treated patients without knowing they had Lassa fever. In 2001, Irrua Specialist Teaching Hospital (ISTH), Edo State was designated as a Centre of Excellence in the management of Lassa fever, along with two other federal tertiary health institutions. It sets up awareness campaigns to sensitize hospital staff and the public to the severity of Lassa fever infection and need for treatment and prevention. Ribavirin was periodically supplied to the hospital by the Federal Ministry of Health and given to suspected cases.

The annual peak of Lassa fever cases in Nigeria is observed in the dry season (December–April), and the number decreases around May. The increased likelihood of humans encountering *Mastomys* rodents and their excreta inside houses during the dry season (when these animals are seeking food) is thought to play a role in the seasonality of disease incidence. Transmission risk might be exacerbated by enhanced survival of the virus at decreased relative humidity (NCDC, 2021).

Prevalence of Lassa Fever in Ondo State

Between January and February 2019, no fewer than 15 persons were confirmed killed by the deadly Lassa fever in Ondo State. It was also revealed that the disease had infected 102 persons in the state within the period under review. According to Ondo State Chairman of the Nigerian Medical Association (NMA), Owo, Ose, Akoko North, Akure South and Akure North LGAs are the areas in the state where the cases were recorded. In January 2023, there were reported 268 suspected cases of Lassa fever, 10% confirmed cases and 8 deaths in Ondo State. According to the Ondo State special adviser on health, Professor Dayo Faduyile, the confirmed cases were recorded in six Local Government areas of Owo, Akure North, Akure South, Ose, Akoko South West and Idanre out of the 18 local government areas. He said Owo local government area recorded the highest number of cases with 68; followed by Akure North with 13; Akure South, 11; Ose, 9; Akoko South West, 5; and Idanre, 1. Despite the Public interventions by the state government which include de-ratification, sensitization against bush burning and exposure of food items and improvement of the State infectious disease Hospital, Akure to a standard that could take care of Lassa fever. There have been persistent outbreaks of the disease to a worrisome dimension.

The high fatality rate of the disease has attracted also elicited the concern of health care providers scholars and policy makers in the state. About 15 people have died in January as a result of the fever but no death has been recorded so far in February. “Most people that died either reported late or were already subjected to alternative treatment and doing self-medication before they eventually came to hospital. Their kidneys and livers had been affected as a result of the delay.

Theoretical Framework

This study is centered on the health belief theoretical model. According to Rosenstock and Becker (1966), a health belief models is a social- psychological health behavior change model developed to explain and predict health-related behavior with respect to acceptance of health interventions. This implies that individual belief about the cause of a particular disease or health condition will go a long way in determining their level of acceptance or otherwise of the intervention. The relevance of this theory to this work rests

on the fact that the people knowledge, attitude and level of awareness of the cause of disease will go a long way in determining where and type of interventions they will seek in combating the disease.

Methodology

The research design for the study is the descriptive research design. This is mostly used for research that has to do with beliefs, attitudes or emotions and it reports subjects or objects the way they are. The study population comprises community residents of Owo LGA of Ondo State. Thus, 368 respondents were considered as the sample size. A multistage sampling technique was adopted for the selection of participants for the study. This type of sampling technique requires the research to select his/her sample in stages until he/she gets the required sample. In using the multistage sampling technique, the eleven political wards in Owo local government area were first identified. They are: Ehinogbe, Igboroko I, Igboroko II, Ijebu I, Ijebu II, Iloro, Ipele, Isaipen, Idasen/ Obasoto, Iyere, Uso/Emure Ile.

Stage 1: This stage involved the using of stratified sampling technique to stratify the eleven wards in the local government into 9 urban wards and 2 rural wards:

Stage 2: Here, 2 urban wards and 2 rural wards were selected through simple random sampling (balloting).

Stage 3: Communities in the 4 selected wards were listed out and 2 communities each were selected randomly (balloting). Thus, 8 communities, 4 from rural wards and 4 from urban wards were selected. The selected communities are: Eyinogbe, Idasen, Iselu, Isijogun, Isuada, Otapete, Upeme, Okeogun. Residents (men and women) in these selected communities were assessed using structured questionnaire. The questionnaire (instrument) has three sections: Section A: The socio-demographic profile of the respondents. Section B: Questions on the knowledge of respondents, on Lassa fever. Section C: Questions on attitude of the respondents, on Lassa fever. Section D: Questions on the respondents' awareness of Lassa fever. The reliability of the research instrument (Questionnaire) was tested through pretest conducted in Otapete, one of the selected communities. A total of 40 respondents were drawn from the selected community for this purpose.

Results and Discussion

The data collected were analyzed using descriptive statistics such as frequency tables, percentage and inferential statistics (Chi-square) was also used for hypotheses testing to show whether there is association between variables under investigation or not.

Table 1: The socio-demographic profile of the respondents

Table 1: Sex of respondents

Sex	Frequency	Percentage %
Male	200	54.35%
Female	168	45.65%
Total	368	100%

Source: Field survey 2023

Table 1 analyzed the sex of the respondents. From the table, 200 respondents (54.35%) of the respondents are male while 168 representing 45.65% are female. This results shows there are more male than female in the sample studied.

Table 2: Age of respondents

Age(yrs)	Frequency	Percentage
18-25	48	13%
26-35	60	16.3%
36-45	200	54.4%
46-85	60	16.3%
Total	368	100%

Source: Field survey 2023

Table 2 analysed the ages of the respondents. 200(54.5%) of the respondents fall within 36-40years of age, while 48(13%) fall within 18-25years and 60 of them representing 16.3% fall within 46-85years of age. 60 of them representing 16.3% fall within 26-35 years of age. This implies that the majority of the respondents are within the prime age and active service.

Research Questions 1: Does the respondents' knowledge of Lassa fever have influence on its incidence?

Table 3: Respondents' knowledge of Lassa fever

Variable	Yes	No	I don't know
Lassa fever is transmitted through:			
A – Rat	327(88.9%)		
B- Birth	18(4.9%)		
C- Mosquito	19(5.2%)		
D- Termite	4(1.1%)		
Lassa Fever can be contracted through contact with exposure to human body fluid of patient	162 (44%)	198 (53.8%)	8 (2.2%)
Sign & symptoms of Lassa fever include, fever, bleeding, kidney failure edema, coma	156(42.4%)	205(58.7%)	7(1.9%)
The incubation period of Lassa fever ranges between 16-21days	215(58.4%)	133(36.1%)	20(5.4%)
Keeping bushes around homes promote incidence of Lassa fever?	222(60.33%)	130(35.32%)	16(4.35%)
Burning of bushes during dry season promote the incidence of Lassa Fever?	208(56.5%)	153(41.6%)	7(1.9%)
Does exposure food items contaminated with rat faeces Urine cause Lassa fever?	253(68.8%)	96(26%)	19(5.2%)
Do you believe Lassa fever can kill if not treated within 14 days of occurrence?	221(60.1%)	101(27.4%)	46(12.5%)

Source: Field survey 2023

From Table 3: 327 representing 88.9% or the respondents agreed that Lassa fever is transmitted by rats while 39(11.1%) disagree. Also 222(60.33%) of the respondent agreed that keeping bushes around home promote the incidence of Lassa fever. In the same vein, 253 of the respondents representing 68.8% averred that exposing food contaminated by rat faeces and urine causes Lassa fever. 221(60.1%) of the respondents agreed that Lassa

fever can kill within 14days if left untreated. On the issue of bush burning during dry season, 208 of the respondents representing 56.5% claimed it promote the spread of Lassa fever. However, 205 of the respondents representing 55.7% disagreed that Lassa fever can result from contact with body fluid of patients. About 215(58.4%) of them equally disagreed that incubation period of Lassa fever is 16-21days. From the above analysis the majority of the respondents have good knowledge of Lassa fever infection which does not reduces the incidence of Lassa fever within the community.

Research question 2: Does the attitude of the respondents influence the incidence of Lassa fever?

Table 4: Respondents attitude towards occurrence of Lassa fever

Variable	Yes%	No%	I don't know
Do you always keep your food stuff in a rodent proof container?	94(25.5%)	259(70.4%)	15(4.1%)
Do you have bushes around your home?	223(60.6%)	111(30.2%)	34(9.2%)
Do you often engage in bush burning in dry season?	235(63.9%)	92(25%)	41(11.1%)
Do you dispose off your waste regularly?	99(26.9%)	269(73.1%)	0
Do you engage in the act of spreading foodstuffs by the road side or open place for sun drying ?	254(69%)	114(30.9%)	0
Do you eat rat and other bush animals?	216(58.7%)	143(38.9%)	9(2.4%)

Source: Field survey 2023

From Table 4, 259 of the respondents representing 70.4% of them claimed that they do not keep their food stuff in rodent proof container while 94(25.5%) answered in the affirmative. Also, 223(60.6%) of the respondents agreed that they bushes around their homes. In the same veins, 254 representing (69%) of the respondents agreed that they do spread their foodstuff by the road side for sun drying while 114(30.9%) answered in the negative. In the same vein, 216 of the respondents (58.7%) averred that they do eat rats and other bush meat, while 143(38.9%) said they are not consuming rats and bush meat. On whether the respondents dispose their waste regularly, 269(73.1%) said they do not dispose their waste regularly while 99(26.9%) said they do. The above analysis, indicate

that the majority of the respondents have negative attitude which exacerbates the incidence of Lassa fever in the local government area.

Research questions 3: Does the level of awareness among the respondents affect the incidence of Lassa fever?

Table 4: Respondents awareness on Lassa fever

Variable	Yes	No	I don't know
How do you get to hear about Lassa fever?			
A- Radio jingle 256(69.6%)			
B- Television 94(25.5%)			
C- Newspaper 9(2.4%)			
D- Internet 5(1.4%)			
E- School 4(1.1%)			
Do you believe Lassa fever is preventable?	108(29.3%)	224(60.9%)	36(9.8%)
Do you believe hunting games at Leisure can increase the spread of LF?	99(26.9%)	207(56.3%)	68(16.8%)
Are you aware there are diagnosis Centre for Lassa fever in Nigeria?	56(15.2%)	282(76.6%)	30(8.2%)
Do you believe keeping cat at home can in a way reduce the incidence of Lassa fever?	281(76.4%)	52(14.1%)	35(9.5%)
Do you believe isolation of Lassa fever patient can help reduce the spread of Lassa fever?	77(20.9%)	250(67.9%)	41(11.1%)
Are you aware keeping spoilt items such as broken plates, broken chair, iron sheet etc. at home increase incidence of Lassa fever?	93(25.3%)	227(61.7%)	48(13%)

Source: Field survey 2023

From Table 4: 256 representing 69.6% of the respondents claimed that they heard of Lassa fever through radio- jingle while 94(25.5%) heard it from television, 5(1.4%) heard it through the internet. About 224(60.9%) of the respondents, also said Lassa fever is not preventable while 108(29.3%) said it is preventable. In the same vein, 207(56.3%) of the respondents disagree that hunting rat for consumption do cause Lassa fever, which 99(26.9%) agreed. On whether isolation of patient can prevent the spread of Lassa fever, 250(67.9%) of the respondents answered in the negative while 77(20.9%) of them agreed. On whether they are aware of Centre established by government for Lassa fever

diagnoses, 282(76.6%) said they are not aware while 56(15.2%) said they aware. Equally 227(61.7%) of the residents averred that keeping spoilt articles or items at home does not help in spreading of Lassa fever, while only 93(25.3%) agreed. The above analysis shows that the majority of the respondents have low awareness of Lassa fever epidemic. Causing high incidence of Lassa fever in Owo LGA.

Testing of Hypotheses

Ho1: There is significant association between the knowledge of the respondents and burden of Lassa fever in Owo LGA.

Table 6:

Variable	N	Mean	Std	R	Sig
Respondents Knowledge	368	33.64	2.42	10.22	.001
Lassa fever burden	368	29.06	1.752		

n= 368

The above result shows there is significant association between respondents knowledge of Lassa fever and its burden in the local government area:- (10.22 and $p < .001$). Hence, null hypothesis should be rejected.

Ho2: There is no significant association between respondents' attitude on Lassa fever and its burden in Owo Local Government Area.

Table 7:

Variable	N	Mean	Std	R	Sig
Respondents attitude	368	35.40	3.42	12.10	0.777
Lassa fever burden	368	36.20	2.75		

n= 368

The above results show there is no significant association between respondent's attitude towards Lassa fever and its burden in Owo Local Government Area. Hence, null hypothesis should not be rejected ($r=12.10$, $p = 0.777$).

Ho3: There is no significant association between the respondents' level of awareness of Lassa fever epidemic and its burden in Owo local government area.

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Table 8:

Variable	N	Mean	Std	R	Sig
Respondents level of awareness	368	36.20	4.42	9.20	0.778
Burden of Lassa fever	368	35.40	3.75		

n=368

Table 8 shows there is no significant association between respondents' level of awareness of Lassa fever and its burden in Owo Local Government Area. Hence, null hypothesis should not be rejected. ($r = 9.20$, $P = 0.778$)

Discussion of Findings

In analyzing the data collected for the study it showed that the majority of the respondents are within the age bracket of 36-45yrs which implies they are within their prime age and active service. Analysis from the study equally shows that majority of the respondents have good knowledge of Lassa fever epidemic. This is evident from the fact that 327 representing 88.9% of them claimed that Lassa fever is transmitted by rats. Also, 253(68.8%) of the respondent averred that exposure to food contaminated by rat faeces and urine causes Lassa fever. Majority of them 221 (60%) agreed that Lassa fever can kill if left untreated. In the same vein, 208(56.5%) of the respondents agreed that burning of bushes in dry season promote the spread of Lassa fever. However, 133(36.1%) of the respondents, do not familiar with the incubation period of Lassa fever as they answered in the negative.

As regards the attitude of the respondents, towards Lassa fever epidemic, the study reveals majority of the respondents have negative attitude towards the incidence of Lassa fever in the Local Government Area. This is evident from the fact that 259(70.4%) of them claimed they do not keep their foodstuffs in a rodent proof container while only 94(25.5%) of them said they do. In the same vein, 254 of the respondents representing 69% agreed they do spread their foodstuff by the road side for sun drying only 30.1% said they do not. In a like manner, 216 of them, (58.7%) agreed they do eat rat and other bush meat while only 143(38.9%) expressed contrary opinion. On whether the respondents dispose of their waste regularly away from home 269 of them representing (73.1%) said they do not dispose of their waste regularly.

On the level of awareness of Lassa fever among the respondents, the majority of the respondents have low, level of awareness of diseases. This is evident from the fact that 224(60.9%) said Lassa fever is not preventable while only 25.5% agreed that it is preventable. Also, 250(67.9%) of the respondents said isolation of patients does not prevent the spread on Lassa fever but only 77(20.9%) said it does. On whether keeping spoilt items like broken bottles, plates, cheer etc at home promote the spread of Lassa fever, 227(61.7%) of the respondents averred that keeping the items at home does not help his spreading Lassa fever. 282(76.6%) of the respondents equally claimed they are not aware of the establishment of Lassa fever diagnostic centre by the government, only 56(15.2%) said they are aware.

The result of this study is similar to the findings of the study carried out by Ilesanmi, Omotoso, Alele, and Adewuyi (2015) on awareness of Lassa fever in a rural community in south west, Nigeria that concluded that over 95% of the community residents of the area have good knowledge, negative attitudes and low awareness of Lassa fever epidemic.

In the same vein, findings on the similar topic carried out by Ekanem, Ekwere, Akwaowo, Emaediong, Mfon, Anietie, Sylvester and Utibe (2018) in a rural community in Southern Nigeria aligned with the findings of this study that most of the residents in the area have good knowledge, negative attitude and low level of awareness of Lassa fever epidemic. However, in sharp contrast to this study, Mbok (2018), Isere et al.,(2022) and Lassa Fever Resources (2023) concluded in their studies that most participants have good attitude towards Lassa fever epidemic.

The hypothesis revealed that there is significant relationship between the knowledge of respondents and the burden of Lassa Fever showing alignment with the findings of Usifor, Amienwanlen, Igbedosa, Uwagie-Ero, Aigbewi (2019) on Lassa fever association with stigmatization among staff and student of University of Benin, Nigeria. It was also revealed that there is no significant relationship between attitude of respondents and the burden of LF which was corroborated by the studies carried out by Richmond, Deborah and Bagole (2003) on Epidemiology, clinical features and society consequences of LF.

Similarly, there is no significant relationship between the awareness of the respondents and the burden of LF in consonance with the findings of Oluyemi, Oyeyiola, Obadare, Igbokwe, Adesina, Onwe, Ukwaja, Ajayi, Rieger, Gunther, Fichet-Calvet (2018); Olowookere, Fatiregun, Gbolahan and Adepoju (2014); Promkerd, Khoparsert, Virathvone, Sirisak and Jakel (2008) and Happi, Olumade, Ogunsanya, Sijuwola,

Ogunleye, Oguzie, Nwofoke, Ugwu, Okoro, Otuh, Ngele, Ojo, Adelabu, Adeleye, Oyejide, Njake, Heeney and Happi (2022).

After due Juxtaposition with respect to the locations of the previous studies, it is hereby recommended that government at all levels should create more awareness campaign and advocacy on clean and safe environment to promote prevention of Lassa fever particularly in the epidemic areas.

Conclusion

Findings from this study concludes that community residents of Owo LGA of Ondo-state have good knowledge, negative attitude and low level awareness of Lassa fever epidemic. Which are responsible for the high incidence of Lassa fever Therefore, there is need for government at all levels to create more awareness campaign and advocacy on clean and safe environment to prevent the spread of Lassa fever, particularly in the endemic areas in the local government.

Recommendations

Based on the findings of the study, the following recommendations are made.

1. Government should establish well equipped-diagnosis Centre in Ondo State for easy Diagnosis and confirmation of Lassa fever.
2. Government should organize workshop or seminar involving religion leaders, schools, Mosques and Churches on how to discourage stigmatization of the victims of Lassa fever.
3. Government should improve on environmental sanitation with particular reference to prompt refuse disposal
4. Government should further create awareness and advocacy particularly in the endemic areas.
5. Proper disposal of waste far away from homes should be encouraged among dwellers
6. Keeping of pet at home should also be encouraged to act as predicator against rats.
7. Regular fumigation of houses should be carried out by the residents
8. Storage of food items in rodent proof containers should be encouraged among residents.
9. Spreading of food stuff on roadsides and open spaces for sundry should be discouraged by the government.

10. Individual caring for Lassa fever patients should always put on protective equipment to prevent him/her having contact with the body by fluid of the patients
11. Training & retraining of health workers in the field and emphasis on stigmatization should be stressed
12. Routine health information should be carried out daily by the workers management.
13. Community based campaign at Lassa fever endemic areas should be intensified upon as this help in combating the epidemic from the source
14. Community dwellers should be encouraged to do away with hurting of games.

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