CORRELATES OF KNOWLEDGE, ATTITUDES AND PREVENTIVE BEHAVIOURS OF LASSA FEVER AMONG RESIDENTS OF EKOSODIN COMMUNITY

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Abstract

The aim of the study was to examine the correlates of knowledge, attitudes and preventive behaviours of Lassa Fever among residents of Ekosodin community. Five research questions were raised and answered in the study. The descriptive survey research design was used to carry out the study. The population of the study was four thousand, seven hundred and thirty (4,730) residents in Ekosodin community while a sample size of three hundred (300) respondents was used for the study. A validated self-structured questionnaire was used and test re-test method was used to ascertain the reliability of the instrument in which a Pearson's Product correlation Co-efficient scoreof 0.88 was obtained. Data collected were analyzed using descriptive statistics of frequency counts, percentages and Pearson's Product Moment Correlation Coefficient.
The result revealed that majority of the respondents have high knowledge level of Lassa fever and its preventive behaviours. They also have positive attitudes toward preventive behaviours of Lassa fever and engage in the preventive behaviours positively. The study also revealed that there is a fairly strong positive relationship between knowledge, attitudes and preventive behaviours of Lassa fever among residents of Ekosodin Community. Based on the findings, the researchers recommended that the high knowledge level of Lassa fever should be sustained through constant jingles in Ekosodin and neighbouring communities.

Keywords: Correlate, Knowledge, attitudes, lassa fever, preventive behaviours

Introduction

Lassa fever is of significant public health concern due to the high morbidity and mortality associated with the disease hence there has been a growing interest in the interrelationship between its knowledge, attitude and preventive behaviours. Lassa fever is an acute viral hemorrhagic zoonotic illness or disease caused by Lassa virus which is a member of the arenavirus family. The virus resides in the natural reservoir species of rats called mastomys natalensis. The rat has many breasts thus the name "multi mammate rat".

The illness was first discovered in Lassa, a settlement in Borno State in the year 1969 and is named after the town in Nigeria where the first cases occurred. Direct contact with food or household items contaminated with the rat's excreta or urine transmits the disease to man. Contact with objects and surface contaminated with urine, excreta, saliva or blood of infected rats also transmits the disease to man. The virus may also be spread between humans through direct contact with the secretions from a person infected with Lassa fever as well as contact with body fluids of an infected person, sexual transmission of Lassa virus has also been reported (Centre for Disease Control and Prevention, 2014).

The predominant occurrence of Lassa fever in both urban and rural areas may be due to relative abundance of the natural host (mastomy rats) in the setting due to poor sanitation, crowded areas, weak health system, inadequate resources to manage cases, poor epidemic preparedness for Lassa fever, poor personal hygiene and poor attitudes towards lassa fever preventions, lack of knowledge of Lassa fever and poor environmental hygiene practices, insufficient access to healthcare facilities and difficulties diagnosing the condition. It should be noted that knowledge about lassa fever and attitudes towards its prevention are crucial in its occurence, prevailence and prevention. A good knowldege and positive attitudes towards lassa fever prevention promote its prevention while poor knowledge and negative attitudes towards lassa fever seem to favour its prevailence.

Houses are the most important locations for transmission of Lassa virus, ignorance of the diseases, negative attitudes towards the disease prevention, superstitions belief also play a huge factor to the predominant occurrence of Lassa fever in rural communities. People of all ages are susceptible to Lassa disease. About 80% of people who become infected with Lassa virus have no symptoms, 1 in 5 infection esults in severe disease, where the virus affects several organs such as the liver, spleen and kidneys (WHO, 2024). From January 1st

through February 9th 2020, 472 laboratories confirmed cases including 70 deaths were reported in 26 out of 36 states in Nigeria (WHO, 2020).

Kareem (2023) observed that the Nigerian Centre for Disease Control and Prevention (NCDC) reported that about 990 cases in 108 local governments and 28 states, while 170 deaths were recorded among the 990 epidemic cases from week 1 to week 27.

Socio cultural factors determine to a large extent the transmission and persistence of infections. Edo State is a rainforest area with the traditional practice of subsistence farming involving bush burning during the dry season resulting in the migration of rats from their natural habitats to human dwellings. Rat infestation is both a health risk and sources of economic loss because of the possibility of destroying properties and transmitting zoonotic diseases (CDC, 2018). The aim of this study was to determine the correlate of knowledge , attitudes and preventive behaviours of Lassa fever among residents in Ekosodin Community.

Statement of the Problem

There is continued increase in number of Lassa fever detected cases and record death despite strategies and mitigation measures put in place in attaining National Health Security, some of which are activating a National Emergency Operation Centres (EOC) with an inter-disciplinary multi-partner technical team to ensure swift treatment and control of any case, surveillance activities enhanced in affected states as well as detailed case investigation, focused has been placed on early detection and diagnosis of individuals infected with Lassa fever.

World Health Organization (WHO, 2015) supported awareness initiatives through provision of information/ communication materials, airing of Jingles on radio stations to sensitize the public on Lassa fever. Strengthening of laboratory capacity and sample transportation system has also facilitated disease detection and report through establishment of the Lassa fever laboratory network, sensitization to increase suspicion of the disease was conducted for health care worker through workshops, surveillance training was provided for public health officers both at the national and state levels (WHO, 2020) (NCDC, 2020).

There is a research trend that point to several factors which influence the increased mortality and morbidity rate due to Lassa fever disease, some of which are low educational level of individuals, poor knowledge and low awareness level of Lassa fever especially in rural and sub-urban communities, poor personal and environmental hygiene, poor sanitation, negative altitudes which results to negative preventive practices which justify the need for this study in order to elucidate the relationship between knowledge, attitudes and its effects on preventive practices, behavioral modification and prevalence of Lassa fever disease.

Research Questions

The present study aim to provide answers to the following research questions

1. What is the knowledge level of Lassa fever among residents in Ekosodin community?
2. What are the attitudes towards preventive behaviours of Lassa fever among residents in Ekosodin community?
3. What are preventive behaviours of Lassa fever among Ekosodin's residents
4. Is there relationship between knowledge level of Lassa fever and its preventive behaviours among residents in Ekosodin community?
5. Is there a relationship between attitudes and preventive behaviours of Lassa fever among residents in Ekosodin community?

Purpose of the Study

The purpose of the study was to find out the relationship between knowledge, attitudes and preventive behaviors of Lassa fever among residents in Ekosodin community.

The study adopted the correlation research design because it helped to determine the relationship between the variables of interest. The population of the study consists of all the four thousand, seven hundred and thirty (4730) male and female residents in Ekosodin community in Ovia North East, Edo State (National Population Commission Edo State, 2020). The sample size of three hundred residents of Ekosodin community was used for the study which represents 6.3% of the total population. The systematic sampling technique was used to select

300 respondents from the population which was done by picking (5) five persons from six houses per street, and a total number of 10 streets were used.

The research instrument that was used for data collection was a self-developed and structured questionnaire. The questionnaire was divided into three sections (A, B, C). Section A sought demographic information from the residents such as sex, age, religion, marital status, highest level of education while section B and C comprised mostly of closed ended items which required the respondents to tick the most correct option from the various options given measuring the respondent's knowledge, attitudes and preventive behaviours of Lassa fever.

The content and face validity of the instrument was determined through the efforts of three experts in the department of Health, Safety and Environmental Education while the reliability of the instrument was established through test re-test method. This was done by administering the instrument twice to 20 respondents within an interval of two weeks. The scores obtained from both administrations were subjected to Pearson's Product Moment Correlation Co- efficient and a coefficient of 0.88 was obtained and this was considered high enough to be used for the study.

The instrument was administered to the respondents in their various homes by the researchers. The researchers patiently waited for the respondents to respond to the instrument and immediately retrieved the instrument from the respondents to ensure high return rate. The collected Data were analyzed using descriptive statistics of frequency count and simple percentage to answer the research questions raised while inferential statistics of Pearson product moment correlation co- efficient were used to analyzed the formulated hypotheses.

Results

Research Question 1: What is the knowledge level of Lassa fever among residents in Ekosodin Community?

Table 1: Frequency and Percentages of the Knowledge Level of Lassa fever in Ekosodin community

S/N	ITEMS	AGREE (%) DISAGREE (%)
1.	Have you heard of Lassa fever	282 (94) 18 (6)
2.	Lass fever is caused by virus	273(92) 27(9)
3.	Lassa fever is a zoonotic disease caused by the multi-mammate rat	276(92) 24(8)
4.	Lassa fever can be transmitted from animals to humans	276(92) 24(8)
5.	Lassa fever can be transmitted from person to person	189(63) 111(37)
6.	Contact with urine and excreta of contaminated rat can cause Lassa fever	279(93) 21(7)
7.	Adults and children can be infected with Lassa fever	282(94) 18(6)
8.	Fever headache and body pain are signs of lass fever	279(93) 21(7)
9.	Vomiting, diarrhoea, coughing and bleeding are signs and symptoms of Lassa fever	264(88) 36(12)
10.	Proper storage of food helps to prevent Lassa fever	297(99) 3(1)
11.	Cleaning the environment helps to prevent Lassa fever	300(0) 0(0)
12.	There is a vaccine to prevent Lassa fever disease	210(70) 90(30)

Table 1 reveals that 282 (94%) of the respondents have heard of Lassa fever while 18 (6%) have not. From table 1 above, 273 (91%) of the respondents agreed that Lassa fever is caused by virus while 27 (9%) disagree. 276 (92%) of the respondents are aware that Lassa fever is a zoonotic disease caused by the multi mammate rat while 24 (8%) are not. Table 1 reveals that 276 (92%) of the respondent knows that Lassa fever can be transmitted from animals to human while 24 (8%) do not. 189 (63%) of the respondents know that lass fever can be transmitted from person to person while 111(37%) do not.

Table 1 also reveals that 279 (93%) of the respondents agreed that contact with urine and excreta of contaminated rat can cause Lassa fever while 21 (7%) disagreed. 282 (94%) of the respondents know that adults and children can be infected with Lassa fever while 18 (6%) do not. 279 (93%) of the respondents know that fever, headache and body pain are signs of Lassa fever while 21(7%) do not. 264 (88%) of the respondents know that vomiting, diarrhoea, coughing and bleeding are signs and symptoms of Lassa fever while 36 (12%) do not. The table also reveals that 297 (99%) of the respondents agreed that proper storage of food helps to prevent lassa fever while 03 (1%) disagreed. 300 (100%) of the respondents know that cleaning the environment

helps to prevent lass fever. Table 1 also reveals that 210 (70%) of the respondents agreed that there is a vaccine to prevent the disease while 90(30%) disagreed.

Figure 1:Chart Showing Knowledge Level Of Lassa Fever Among Ekosodin Residents

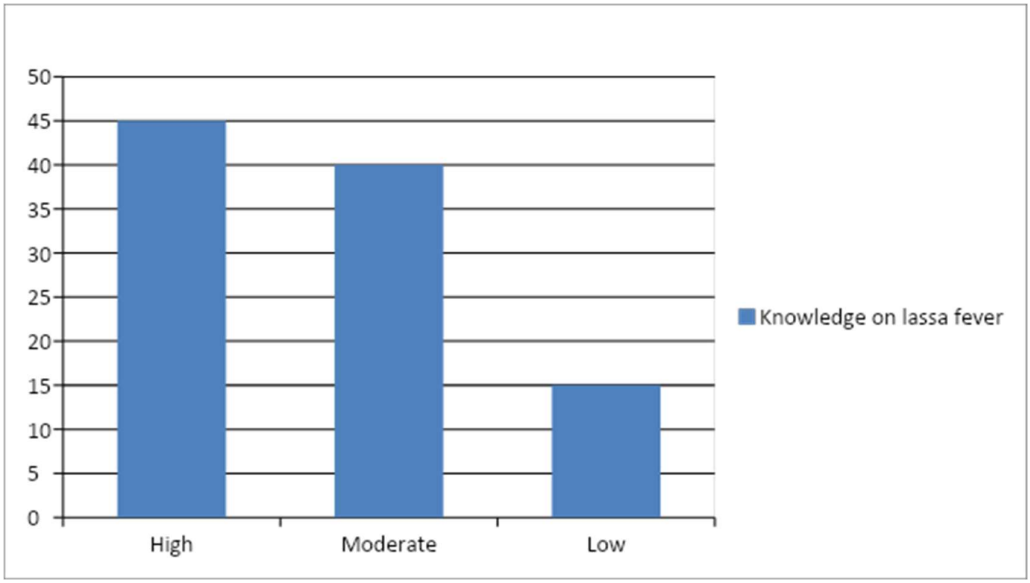

Figure 1 reveals that 45% of the entire respondents have high knowledge level of Lassa fever while 40% of the respondents have moderate knowledge level of Lassa fever. The figure also reveals that 15% of the total respondents have low knowledge level of Lassa fever in Ekosodin Community.

Research Question 2: What are the attitudes toward preventive behaviours of Lassa fever in Ekosodin Community

Table 2: Frequency and Percentages of the Attitudes toward preventive behaviours of Lassa fever in Ekosodin Community

S/N	ITEMS	AGREE (%)	DISAGREE (%)
1.	I have a role to play in the prevention and spread of Lassa fever in the community	273(91)	27(9)
2.	Anyone found with rats should be arrested	96(32)	204(68)
3.	Rats are very proteinous and the consumption should be encouraged	60(20)	240(80)
4.	Lassa fever is a spiritual illness and cannot be caused by rodents	30(10)	270(90)
5.	Rats are harmless and should not be killed	37(13)	261(87)
6.	Rats are harmless and should be allowed to live in our home and surrounding	33(11)	267(89)
7.	Wickedness and evil that men do lead to death and not viral diseases from rats	39(13)	261(87)
8.	I can't live in the same house with people that eat rat	159(53)	141(47)
9.	Lassa fever cannot kill an "African man"	48(16)	252(84)
10.	Anyone caught eating rats should be fined	99(33)	201(67)

Table 2 above reveals that 273 (91%) of the respondents have a role to play in the prevention and spread of Lassa fever in the community while 27 (9%) do not. 91 (32%) of the respondents agreed that anyone found with rats should be arrested while 204 (68%) disagreed. Table 2 also reveals that 60 (20%) of the respondents agreed that rats are very proteinous and the consumption should be encouraged while 240 (80%) disagreed. 30 (10%) of the respondents agreed that Lassa fever is a spiritual illness and cannot be caused by rodents while 270 (90%) disagreed. 39 (13%) of the respondents agreed rats are harmless and should not be killed while 261 (87%) disagreed.

Table 2 shows that 33(11%) of the respondent agreed that rats are harmless and should be allowed to live in our home and surrounding while 267 (89%) disagreed. 39 (13%) of the respondents agreed that wickedness and evil that men do lead to death, not viral diseases from rats while 261(87%) disagreed. 159 (53%) of the respondents cannot live in the same house with people that eat rat while 141(47%) can. Table 2 reveals that 48 (16%) of the respondents agreed that Lassa fever cannot kill "African man" while 252 (84%) disagreed. 99 (33%) of the respondents agreed that anyone caught eating rats should be fined while 201 (67%) disagreed.

Figure 2: Chart Showing Attitude Towards Lassa Fever Preventive Behaviours Among Ekosodin Residents.

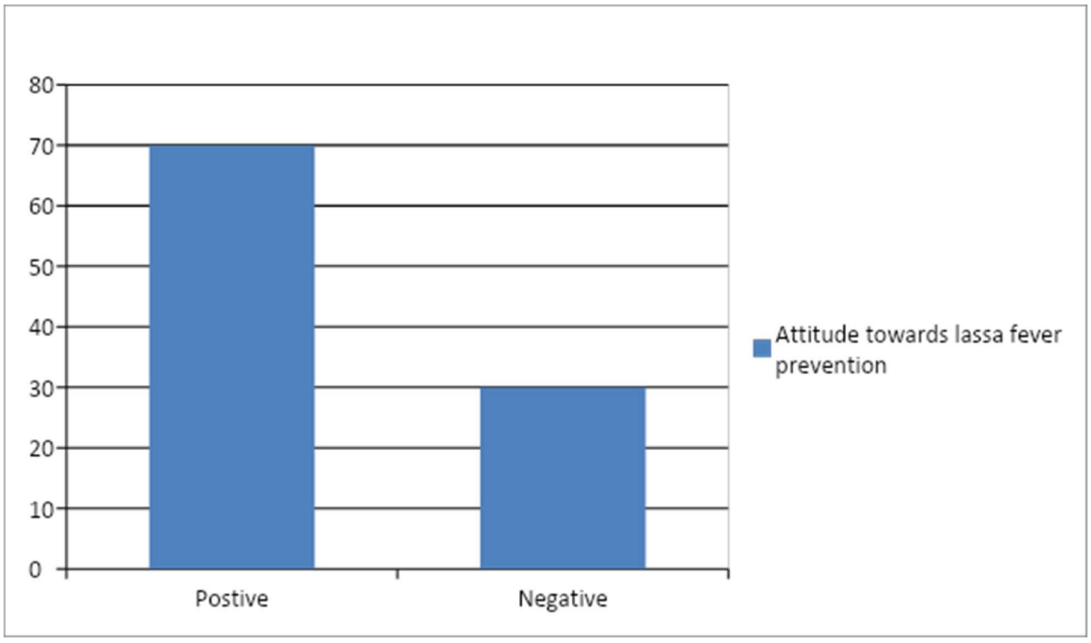

Figure 2: Bar chart of attitudes toward Lassa Fever Preventive Behaviours of Lassa fever in Ekosodin Community

Figure 2 shows that 70% of the total respondents have positive attitude towards preventive behaviours of Lassa fever while 30% of the respondents have negative attitude towards the preventive behaviours of Lassa fever.

Research Question 3 What are the preventive behaviours of Lassa fever among Ekosodin residents
Table 3: Frequency and Percentages of the Preventive Behaviours of Lassa Fever among Ekosodin residents

S/N	ITEMS	AGREE (%)	DISAGREE (%)

1.	I clear round my compound to prevent hideout	294(98)	06(02)
2.	I dispose my waste bin properly to avoid infestation of rodents	294(98)	06(02)
3.	I store food items in cupboards and covered container	288(96)	12(04)
4.	I avoid contact with people who are diagnosed of Lassa fever	267(89)	33(11)
5.	I ensure that dump sites are located far from the home	291(97)	09(03)
6.	I participate/ engage in environmental sanitation on public days declared by the government	279 (93)	21 (07)
7.	I clean my kitchen, home and compound always	291(97)	09(03)
8.	I discard the whole food when discovered that rat has eaten a portion out of it	255(92)	24(08)
9.	I avoid self-medication and take my loved ones to the hospital whenever they are ill	276(92)	24(08)
10.	Whenever there is an outbreak of disease, I adhere to the instructions and measures set out by the government	282(94)	18(09)

Table 3 shows that 294 (9%) of the respondents clear round the compound to prevent hideout 06 (2%) don not 294 (98%) of the respondents dispose their waste bin properly to avoid infestation of rodents while 06 (2%) do not. Table 3 reveals that 288 (96%) of the respondents store food items in cupboards and covered container while 12 (04%) do not. 267(87%) of the respondents avoid contact with people who are diagnosed of Lassa fever while 33 (11%) do not. 291 (97%) of the respondents ensure that their dumpsites are located far from the home while 09 (03%) do not.

Table3 also shows that 279 (93%) of the respondents participated environmental sanitation on public days declared by the government while 21 (07%) do not. 291 (97%) of the respondents clean their kitchen, home and compound always while 09(03%) do not. 255 (85%) of the respondents discard the whole food when discovered that rat has eaten a portion out of it while 45 (15%) do not. 276 (92%) of the respondents avoid self-medication and take their loved ones to the hospital whenever they are ill while 24 (08%) do not. Table 3 also reveals that 282 (94%) of the respondents adhere to the instructions and measures set out by the government whenever there is an outbreak while 18 (06%) do not.

Figure 3: Chart Showing Preventive Behaviours Of Lassa Fever Among Ekosodin Residents

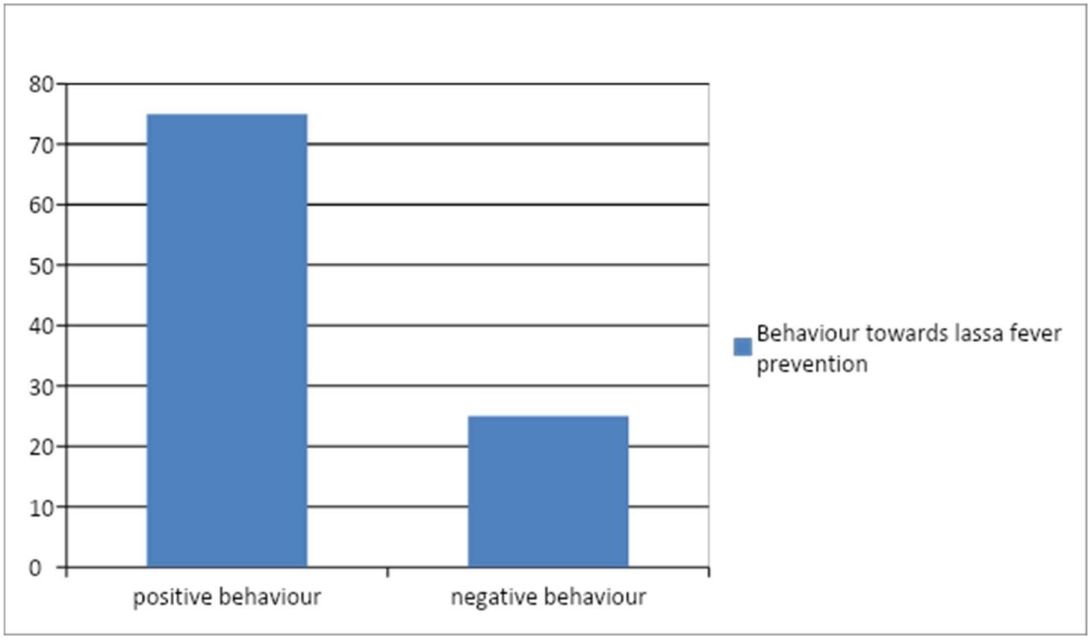

Figure 3 above reveals that 75% of the total respondents have adequate preventive behaviours of Lassa fever among Ekosodin residents while 25% of Lassa fever while 25% of the respondents have inadequate preventive behaviours of Lassa fever.

Research Question 4

Table 4: Pearson r of Relationship Between Knowledge of Lassa Fever And Its Preventive Behaviours Among Ekosodin Residents

variables	N	r	Relationship	Remarks
Knowledge preventive behaviour	300	0.203	positive	fairly strong

Table 4 above reveals that the Pearson correlation value is 0.203, thus it can be seen that there is a fairly strong positive relationship between knowledge of Lassa fever and its preventive behaviours.Table 4 shows that as knowledge of Lassa fever increases, the preventive behaviours among Ekosodin residents increases.

Research Question 5

Table 5: Pearson r of Relationship Between Attitude And Preventive Behaviours Among Ekosodin Residents.

variables	N	r	Relationship	Remarks
Attitudes preventive behaviour	300	0.456	positive	fairly strong

Table 5 above shows that the Pearson correlation value is 0.456 thus it can be seen that there is a fairly strong positive relationship between attitude towards Lassa fever and its preventive behaviours.From table 4, it can be seen that as attitude towards Lassa fever increases, the preventive behaviours among Ekosodin residents increases.

Discussion of Findings

The study was carried out to examine the correlates of knowledge,attitudes and preventive behaviours of Lassa fever among residents in Ekosodin community. the discussion of the study is based on the findings;

Firstly, it was observed in the current study that majority of the respondents have moderately high knowledge about Lassa fever. this finding disagree with the findings of lghedosa, Odigie, Usifoh, Asemota and Aighewi (2016) where majority of the respondents had poor knowledge of Lassa fever disease. the findings from this study also disagrees with findings from a study by Usuwa, Akpa and Balogun (2020) where majority of the respondents had poor knowledge of Lassa fever disease but agrees with the findings of Ossai, Onwe, Okeagu, Ugwuoru, Eze and Nwede (2020), where majority of the respondents (60%) had good knowledge of Lassa fever and majority (66.4%) also demonstrated good preventive practices

It was also observed in the current study that majority of the respondents demonstrated positive attitude towards preventive behaviours of Lassa fever.this finding is similar to the findings of Ogboghodo, Adam, Omuemu and Okojie (2019), where majority of the respondents had an overall positive attitude towards Lassa fever prevention and also agrees with findings from a study done in Ebhodiza, Uhiele- Ekpoma in (2010) where 70% of the respondents had positive attitude towards Lassa fever prevention but disagrees with findings of Olowookere et al (2017) where majority of the respondents had negative attitude towards Lassa fever.

The current study reveals a fairly strong positive relationship between attitude towards Lassa fever prevention and good preventive behaviours. this findings disagrees with the findings of Ogboghodo,Adam, Omuemu and Okojie (2019), where majority of the respondents had positive attitude towards Lassa fever prevention yet a higher proportion of the respondents exhibited poor preventive practices against the disease which was attributed to the fact that majority of the respondents had poor knowledge of the preventive measures necessary to prevent Lassa fever.

It was observed from the current study that majority of the respondents have good Lassa fever preventive behaviours and adequate knowledge of the necessary Lassa fever preventive measures. this findings disagrees with findings of Ogboghodo, Adam, Omuemu and Okojie (2019) where majority of the respondents had poor preventive practices against Lassa fever and thus recommended that measures should be put in place by all stakeholders to bridge the gap in knowledge of Lassa fever and its preventive behaviours. The findings in this study agrees with findings by Ukwenya, Fuwape, fadahunsi and llesanmi (2020) where majority of the respondents (77.8%) demonstrated adequate preventive practices against Lassa fever.

The current study reveals a fairly strong positive relationship between knowledge of Lassa fever and adequate preventive behaviours which agrees with findings by Ossai, Onwe, Okeagu and Ugwuoru (2020) where majority of the respondents had good knowledge of Lassa fever and adequate preventive behaviours and thus stated that good knowledge of Lassa fever was associated with good preventive practices hence there is need for a good understanding of Lassa fever among the population as it improve preventive practices.It was observed from the current study that Educational level, age and Socio-Economic status of respondents significantly influence the knowledge, attitude and preventive behaviours of Lassa fever. This findings agrees with findings of Olowookere, Adegbenro, Idowu and Oderinde (2017) where majority of the respondents had inadequate knowledge of Lassa fever, negative attitude and poor preventive behaviours due to determinants like low education level, age and low income earners thus it is necessary to increase public education and standard of living.

Conclusion

From the findings of the research, it was seen that there is a relationship between knowledge of Lassa fever, attitudes towards Lassa fever prevention and preventive behaviours of Lassa fever thus there is need for adequate awareness of the disease, increased sensitization, wide reach and access to adequate knowledge of Lassa fever as this would lead to increased participation in its preventive practices in various communities across the state and nation at large.

Recommendations

Based on the findings, the following recommendations were made

1. Urban communities should be properly sensitized in-order to improve awareness and knowledge of Lassa fever.
2. Adequate measures should be put in place by the government and other stakeholders against Lassa fever outbreak.
3. There should be public- private partnership towards eradication of Lassa fever disease.
4. There should be radical environmental sanitation education and enforcement of the sanitation by- laws in order to promote clean environment free of rodents.

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