



Knowledge and Compliance with Lassa fever Radio Campaigns in Selected States in Nigeria

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Abstract

Several researches have been conducted on Lassa fever in Nigeria; however, no research had evaluated the people's knowledge of and their compliance with these radio campaigns in the endemic states under study. This study seeks to evaluate the audiences' knowledge and compliance with the radio campaign messages towards curtailing the spread of the Lassa fever. The study adopted survey research design. Multi-stage sampling was used to select 385 respondents while structured questionnaire was used for data collection. Data were analysed with descriptive statistical tools and results presented using tables and charts. There is a high level of exposure to and knowledge of radio campaigns against Lassa fever among residents of the select states as confirmed by 88.1% and 78% respectively. However, the campaigns did not significantly influence the behaviour of the respondents who live in the rural areas as they still see rats as source of meat with the belief that dirt does not kill Africans. There is need for more strategic campaign measures to instill personal and environmental hygiene among illiterate population of the rural dwellers.

Keywords: Lassa fever, Radio Campaigns, knowledge, Health Behaviour.

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Introduction

The growth and productivity of every nation depends on the health and wellbeing of citizens of that nation. When citizens' health is threatened by diseases, the nation's development is adversely affected. One disease that has ravaged many parts of Africa, including Nigeria, is Lassa fever. This disease has led to untimely death of lots of people in different parts of West Africa, Nigeria inclusive.

Lassa fever, known to be spread by rats, is a high contagious disease which was first discovered in 1969 following the death of two missionary nurses at Lassa village in Borno State, Nigeria, whose deaths were traced to the disease. Since then, there have been sporadic outbreaks of the disease across West Africa, Nigeria inclusive. (Annie, 2015, p. 11). However, Adefisan (2014) cited in Wogu (2018, p.8), faults the position of scholars who hold that that Lassa fever was discovered first in Nigeria in 1969, positing that the root of the disease is traceable to its discovery in Sierra Leone in the 1950s. Lassa fever is among the largest burden of viral hemorrhagic fevers in West Africa after yellow fever and the Ebola viral disease (Lucas and Gilles 1990) cited in (Nwankwo and Orji 2017, p. 11).

In Nigeria, Lassa fever outbreak has been a yearly occurrence which has always affected great number of individuals (WHO, 2017). Ogundipe (2016, p.12), avers that fifty-one (51) million Nigerians are currently estimated to be at risk of contracting the infection with three million illnesses and 58,330 deaths annually.

Between January and April, 2019, the National Centre for Disease Control (NCDC) reported that there were a total of 355 confirmed cases with 75 deaths from 20 states including Ebonyi, Edo and Benue states. This virus is transmitted through contact with rat's excreta deposited around homes, on human food and wastes (Wogu, 2018).

As Nigeria consistently experiences the outbreak of Lassa fever, the mass media play important roles in enlightening the public on the disease which helps them cultivate the right attitudes with reference to the disease (Onyike, 2018). In this regard therefore, the Nigerian media have been greatly utilized in carrying out sensitization campaigns on awareness and prevention of Lassa fever over the years.



Research has shown that adopting the media for health information dissemination is very important in shaping public beliefs and behaviour (Diedong, 2013). It has remained the tradition of public health organizations to use the radio medium in disseminating important health messages to the public. In the past few decades, electronic media have taken the lead in communication and public health communication has evolved to reflect this (Newbold & Campos, 2011).

Therefore, in response to these past and recurrent outbreaks of Lassa fever in Nigeria, the Federal and State Ministries of Health (FMOH), Nigeria Centre for Disease Control. (NCDC), etc. have initiated several media campaigns and other communication intervention initiatives towards combating the Lassa scourge (Adefisan, 2014).

In the transmission of Lassa fever awareness messages, there are different electronic media campaigns sponsored by both the federal and different governments of Nigeria in bids to create enough awareness about Lassa fever among the masses. The campaign themes include; “Bu GunuBuUnu Na Ahu?” (Which means - What are you people roasting?); “Lassa Fever Tips-Your Health is your Wealth; “Health Talk” and “Your Health.” The common objectives of these campaigns are to sensitise and educate residents of the select states on the dangers of Lassa fever infections, the causes, signs/symptoms and how to stop the virus.

Statement of the Problem

The essence of these radio campaigns is to ensure that many people, especially those in the remote villages receive the messages and act in the desired manner. However, it has remained uncertain whether these campaigns have been successful or not in impacting positive health behaviour. Although, several studies have been done on Lassa fever in Nigeria, researches that evaluate the people’s knowledge of and their compliance with these radio campaigns in the endemic states under study are still lacking. This study therefore seeks to evaluate the audiences’ knowledge and compliance with the radio campaign messages towards curtailing the spread of the Lassa fever.



Objectives of the Study

This study was aimed at:

1. Determining the extent to which residents of Ebonyi, Edo and Benue states are exposed to radio campaigns on Lassa fever.
2. Ascertaining the level of public awareness of Lassa fever radio campaigns in Ebonyi, Edo and Benue States.
3. Determining the extent of knowledge of Lassa fever gained by residents of Ebonyi, Edo and Benue States from the radio campaigns on the disease.
4. Ascertaining how effective the Lassa fever radio campaigns have been in influencing the attitudes of residents of Ebonyi, Edo and Benue States towards the disease.

Literature Review

Lassa fever: History, Nature and Menace

Nigeria is one of the West African countries in which Lassa fever is endemic, with seasonal outbreaks occurring annually between December and June (WHO, 2017). According to McCormick² and Ogbuet *al* Lassa fever has claimed 5000 to 10,000 lives worldwide with an estimated two million infections every year, while West Africa alone records an estimated 300,000 to 500,000 cases of Lassa fever hundreds of deaths. Over the years, there have been sporadic outbreaks of Lassa fever across West Africa, Nigeria inclusive.

According to Ogbu, Ajuluchukwu & Uneke(2007), early symptoms of Lassa fever are similar to those of many other common febrile illnesses such as flu, malaria or typhoid. The symptoms typically occur 1-3 weeks after a person is infected.

The National Centre for Disease Control (NCDC, 2018) report shows that laboratory tests confirmed that in the first three months of 2018, at least 317 people were infected and at least 64 died. In contrast there were just 143 laboratory confirmed cases in all of 2017 and just 101 in 2016. In the Lassa fever outbreak of 2019, 19 out of 36 (53%) states- (Ogun, Bauchi, Plateau, Ebonyi, Ondo, Edo, Taraba, Nasarawa, Rivers, Kaduna, Gombe, Cross-River, Borno, Kano, Kogi, Enugu, Anambra, Lagos and Kwara) had reported at least one confirmed case (WHO, 2019, p.3; NCDC, 2019).



The best way to prevent Lassa fever as suggested by NCDC (2016) is to avoid rats, putting food away in rat-proof containers and keeping the home clean to discourage rats from entering homes. Other ways include avoiding the use of rats as source of food and using rats-traps in and around homes to reduce rat population (NCDC, 2016).

The Mass Media as Effective Tool for Health Communication

The promotion of knowledge on health matters is one of the duties of the mass media. According to Bello (2015, p.17), the media are the major sources to learn about health issues and to receive health information for healthy living and survival on health related matters. This health information is sought by people to be aware of health risks, disease outbreaks, domestic and international alerts and also healthy living (Torwel& Rodney, 2010).

A study by Kogah & Nwadiaro (2016) shows the critical role of the press in creating awareness, setting the agenda and framing of health issues, thereby reducing the impact such epidemic outbreak will have on the socioeconomic life of the people. Generally, the media have been found to be effective in creating awareness on health issues and the promotion of health behaviours. In their study, Robinson & Levy (1986) found that when people need information on health issues that would better their lives, they rely on media and information repositories such as documents and databases.

The aim of every media health campaign programme is to generate positive effects among the target audience. However, the media cannot influence anyone who is not exposed to the contents. Wakefield, Loken & Hornik, (2010) hold that the effectiveness of media messages lie in audience exposure, attention and retention of such messages, which will in turn bring about the desired changes.

Empirical Review

Behavioural changes and knowledge of diseases like Lassa fever can be effectively transmitted and obtained through the mass media messages and intervention programmes. For instance, the result of study conducted by Adejosi et al (2017) emphasized the role of the media in educating the people on Lassa fever. According to this study, radio (78.3%), television (57.0%), social



media (43.7%) and newspaper/magazine (33.3%) are ranked in that order which are, the sources of information on Lassa fever among the respondents in the study. This finding is in line with the assertion of Rokeach & DeFleur (1976) on their Media Dependency theory which states that individuals tend to be more dependent on the media that meet a number of their needs than the media that provide just a few and they also depend on the media for social stability when established institutions, beliefs and practices are challenged.

A study conducted by Adefisan, (2014) sought to assess the level of awareness that rat is a vector of Lassa fever among the rural people of Ijebu North LGA of Ogun state The findings of showed that both literate and illiterate rural dwellers irrespective of gender had no awareness of rat as vector of Lassa fever. Although literate respondents showed level of awareness, the number is significantly low. This researcher recommended that serious enlightenment campaigns on the danger of rat as Lassa fever vector should be intensified among rural people and efforts should be made to motivate them to avoid spreading of food stuffs along road sides and patronize clinics in the event of illness.

In a related study, Reuben & Gyar (2016) sought to assess the knowledge, attitudes and practices of Lassa fever in and around Lafia, Central Nigeria. Their findings showed that 87% respondents heard of Lassa fever and those in urban areas were more aware (89%) of Lassa fever than those from the sub-urban (80%). This was attributed to the easy and constant access to health information by the urban dwellers from different sources. They consequently suggested that public health awareness should be intensified especially among the sub-urban dwellers so as to reduce the spread of Lassa fever vector and the virus.

In a similar study conducted in Edo State Nigeria to assess the knowledge and attitude towards Lassa fever in a suburban Edo community, 95% of studied health care workers were knowledgeable of Lassa fever disease (Tobin *et al.*, 2013). The most common mode of prevention within communities was indicated as the proper storage of food by 111 (84.7%). However, 38.9% of these health workers had a poor knowledge of the disease. In conclusion, the authors note that it was necessary for these medical personnel to be properly informed about the disease since they are the initial contacts for people seeking medical assistance.



Contrary to the above findings, the study of Omotowo, Eyisi, Obi & Agwu-Umahi (2014) who assessed the knowledge, attitudes and practices regarding Lassa fever among healthcare workers in Enugu, South-East Nigeria: Implications for control” found that majority of health workers had good knowledge regarding Lassa fever; only 2.8% have not heard about Lassa fever. Based on the findings, most of the participants knew correctly that Lassa fever can affect all age groups 91.7%, can cause death 92.3%, is a communicable disease 93.8% and transmitted by rats 96.6%.

The sources of information on Lassa fever identified by Olalekan (2015, p.28) in his study were TV/radio 74 (73.3%), textbooks 5(4.9%) and Health care workers 14(13.9%). This result showed that the media (TV and radio) were the main source of information on health.

Theoretical Framework

This study was anchored on the **Agenda Setting Theory** and **Health Belief Model**.

The Agenda Setting Theory propounded by Maxwell McCombs and Donald Shaw between 1972 and 1973 implies that the mass media predetermine what issues are regarded as important at a given time in a given society. The relevance of this theory to this study is that, with persistent focus and continuous emphasis of the radio health programmes on the need to live disciplined lives and to avoid risky health behaviours, the tendency is there that the respondents will be empowered with more knowledge of Lassa fever infection and its attendant health risk, which could in turn, engender positive attitude towards the prevention and control of the disease. **Health Belief Model** developed in the 1950s by Hochbaum, Rosenstock and Kegelts posits that higher perceived threats leads to a higher likelihood of engagements in health promotion behaviours. On the relevance of the theory to this study, it is believed that when residents of the select states perceive through radio campaigns against Lassa fever that the disease is a health threat and also perceive themselves as being at risk of contracting the disease, the tendency is there that will adopt media recommended health behavior in order to be safe from the disease.



Methodology

The research design adopted for this study was survey. Survey was applied because the nature of the study calls for soliciting direct opinion from people living in the study areas to ascertain how Lassa fever radio campaigns have influenced their knowledge of the disease and their attitude towards the prevention of the disease in the endemic states. The questionnaire copies were distributed to the respondents through the aid of research assistants who were duly trained.

Population

The population of study comprised all the residents of the three selected states which are; Ebonyi, Edo and Benue. These three states were chosen due to their endemic nature according to the NCDC. The total projected population figure of this study was 13,684,159. This population was projected from the 2006 population (Provided by the National Bureau of Statistics) using United Nations Development Programme (UNDP) population extrapolation index of 3.2% per annum as cited in (Owuamalam, 2010).

Sample Size

From the overall projected population figure above, a sample size of 385 was determined using Meyer's sample size determination formula (1973). The sample size was further increased by 40% to arrive at 539 as shown below:

$n + 40\% \text{ of } n$ (where n is the basic sample size)

$385 + (40\% \text{ of } 385)$

$385 + (0.40 * 385 = 154)$

$385 + 154 = 539$.

Discussion

The findings of the study revealed that 81.1% of the respondents have heard about Lassa fever through the radio campaigns, indicating very high exposure to radio campaigns on Lassa fever by the respondents. The exposure to the radio campaign messages may be attributed to the fact that respondents listen to radio often to about 73%. This finding agrees with the outcome of the study of Olowookere *et al* (2014) study titled 'knowledge, attitude and practices towards Lassa



fever control and prevention among residents of Ile-Ife, South-West Nigeria' which found that 59% residents of Ile-Ife, South-West Nigeria heard about Lassa fever with radio as their major source of information.

Findings of the study also indicate that respondents are aware of the various radio campaigns on Lassa fever in the states studied. Responses show that more than 43% of the respondents listened to the radio campaign on Lassa fever always while 39% listened occasionally. This resulted to recall of the campaign messages to about 57.7% well and 28.3% very well. The implication of this is that respondents were not only aware of the radio campaigns but could recall the messages. Message recall is a requisite for compliance and actions. It showed that awareness of level of Lassa fever media campaign among the respondents is 62.3% high and 15.7% very high respectively. This finding is similar to the findings of Reuben &Gyar (2016) study on knowledge, attitudes and practices of Lassa fever in and around Lafia, Central Nigeria, which revealed that 87% respondents heard of Lassa fever and those in urban areas were more aware (89%) of Lassa fever than those from the sub-urban (80%).

It was also found that respondents are knowledgeable to a high extent on issues concerning Lassa fever. It indicated that respondents were educated on the causative factors/agents and preventive measures of Lassa fever. The study revealed that the media campaigns are effective in influencing respondents' attitudes towards Lassa fever. It indicated that respondents believed that media campaign against Lassa fever is a good initiative; made them to take the disease seriously, take precautions against rats and other vectors, made them to tell others about the dangers of Lassa fever and to report suspected cases of the virus to health authorities. This result agrees with the findings of Olalekan (2015) study which reported that respondents have good education of occurrence, causes, disease transmission, as well as prevention and control of the disease.

The result of this study also shows that the media campaigns on Lassa fever have significant influence on the health behaviour of respondents. The campaigns enabled them to adopt certain measures and actions to prevent the disease. Data to this effect indicate the media campaigns on Lassa fever have compelled respondents to fumigate and cover all rats holes in their residential areas, desist from eating rats as meat; kill all rats found in and around the house;



store and cover foods properly, etc .This finding supports the theory of planned behaviour which assumes that human beings are usually rational and make systematic use of information available to them (Ajzen & Fishbein, 1980).

Conclusion

This study has shown that health education through mass media is an effective means of enhancing people's knowledge and better behavioural changes. The radio campaigns aimed at sensitizing the public on Lassa disease can be adjudged to be effective, as evident from the findings showed that awareness and knowledge level of Lassa fever among residents of select states were high. However, more awareness has to be created not only through the media but through community, social and religious leaders, so that the campaign will reach the remotest part of the hinterlands. This is based on the finding that knowledge level of Lassa fever was higher in urban areas and among the educated ones.

Again, some respondents in rural areas still eat rats as meat, while some do not practice personal hygiene because they believe Africans are not killed by dirt. This study therefore concludes that, though Lassa fever media campaigns have positively influenced the attitudes and health practices of majority of residents of Ebonyi, Edo and Benue states; the campaigns need to be intensified not only during outbreak of this disease but on constant or yearly basis.

Finally, in addition to the Institute of Lassa fever Research, Irrua Specialist Teaching Hospital Edo State, which is the only functioning Lassa fever diagnostic centre in Nigeria (out the five established Lassa fever centres), more functional centres should be created across the country for easy and prompt access to healthcare centres.

Recommendations

Based on the research findings, the following recommendations were made:

1. Data revealed that the knowledge level was higher among those in urban areas and the educated ones. As such, there is need for more intensive campaigns to increase the awareness and knowledge level on this epidemic, especially among the illiterate population in the rural areas using other means like using community leaders and religious leaders.



2. There should be continued and enhanced collaboration by governments at all levels with other health agencies like WHO, CDC, UNICEF which are fundamental to bringing Lassa fever outbreak to check and curtailing the effects of this contagious disease. These response efforts can come in form of communication activities and social mobilization aimed at encouraging early detection of disease, isolation and treatment of identified cases and encouraging rural communities to uphold rodent prevention and control measures.
3. The fact that Institute of Lassa fever Research, Irrua Specialist Teaching Hospital, Edo State is the only functioning diagnostic centre in the country is not adequate. Therefore, it is recommended that concerted effort be made by Nigeria government to establish and adequately equip more Lassa fever diagnostic centres in different States of Nigeria, especially in endemic States. Then, the already established diagnostic centres in Ebonyi, Calabar and Lagos should be well equipped and properly funded to save citizens lives.
4. This study focused only on three endemic states of Ebonyi, Edo and Benue which does not even reflect the six geopolitical zones in Nigeria, so the findings obtained might not be exclusively and adequately generalized on the entire country. In view of this therefore, there is need for a nationwide survey that will assess the influence of media campaigns on the respondents from all the six geo-political zones in Nigeria.

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