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EFFECTIVENESS OF RADIO IN DISSEMINATING COVID-19 INFORMATION TO CROP FARMERS IN IKWERRE LOCAL GOVERNMENT AREA, RIVERS STATE

Harry A.T[1], Igwe, F.[2]& Gilbert, Sarah Onisoya.[3]
[1&2]Department of Agricultural Extension and Rural Development,
[3]Departmetn of Agricultural Economics and Extension, Rivers State University, Nigeria

Author for Correspondence: Email:harryariamebo@yahoo.com, ariaebo.harry@ust.edu.ng

ABSTRACT

The study focused on the effectiveness of radio in disseminating covid-19 information to crop farmers in Ikwerre Local Government Area, Rives State. The objectives of the study were to; describe the socio-economic characteristics of rural farmers, determine the level of awareness of the farmers about covid-19, identify the sources of covid-19 information available to farmers, examine the prevention strategies communicated by the media and its effectiveness and identify the constraints of the radio in disseminating COVID-19 information to farmers in the study area. The population of the study were crop farmers in Ikwerre. Random sampling procedure was used to select 6 communities in Ikwerre Local Government Area, bringing to a total of 100 respondents. Data were analyzed using descriptive and inferential statistics. A well-structured questionnaire was used to elicit data from the respondents. The result revealed that 68.0% of the respondents were female, 32.0% were male, 10% were single, 38% were married, and 52% were widowed. The mean size of the household was 7 persons, 6% had no formal education, 49% had primary education, 31% had secondary education, and 14% had tertiary education. The mean farming experience was 16 years, the mean age of the farmer is 44 years and the mean income level (₦) was 27,660. The awareness level of the farmers about covid-19 was high as a great number of the respondents were aware through its signs and symptoms. Majority (77%) of the respondents used Radio as a source of information on Covid-19, 62% of them obtained their information from Newspapers, 23% got theirs through the Television, 9% from Magazines and 8% got their information from the social media. To show the radio's effectiveness (100%) of the respondents agree that washing of hands is a prevention practice from Covid-19 infection, 99% of them identified Putting on of face marks as a prevention practice, 96% used Regular hand sanitizing, 89% of them observed Avoid crowded areas, and Stay Ten meters apart respectively.85% observed No handshakes and 84% agreed that No hugs were prevention practices communicated by the media. The major constraints faced by the respondents in accessing covid-19 information on radio were; high cost of getting a radio ($\bar{x}$ =3.54), lack of breakdown information ($\bar{x}$ =3.34), erratic power supply ($\bar{x}$ =3.22), and lack of visual content ($\bar{x}$ =2.70). The study recommends that farmers should be encouraged to own radio sets and continue to rely on farm radio programmes for agricultural information.

Keywords: Effectiveness, Disseminating, Covid – 19 and Information

INTRODUCTION

Mass media in the words of Hall (1981) is essentially a working group organized around some device for circulating the same message at about the same time to large numbers of people. Mass medium however is a singular concept, the plural of which is mass. In the light of the above definition therefore the mass media are channels of mass communication used to disseminate news and information to very diverse and large numbers of people simultaneously. Invariably the epoch of the mass communication system, relatively large audience members could be quickly reached irrespective of their different locations in the global geopolitical cultural map Nwodu (2002). Instruments of mass communication around the world usually exists in the form of: radio,

television, cinemas and mobile devices which constitute the electronic media and newspapers, magazines, books and journals which constitute the print media. The term radio became popularized in the early 20th century with the development of different radio-based technologies. The word itself originates from the Latin word 'radius' which means ray or beam. The use of radio as a channel of communication has led to an increase in the knowledge level and output of farmers in rural communities over the years. Ekoja (2003) has mentioned that the information sources in different aspects of agriculture for the farmers who live in rural communities are radio and television, the propagational publication, daily farm newspapers, agricultural exhibitions, practical education, and consultation services, respectively.

In Nigeria, the studies conducted by Arokoyo (2003) showed that although the radio, and television are the major sources of information for the farmers in rural communities, it is still possible to use other developed equipment in disseminating agricultural and other information to the farmer through the use of other mass media tools such as social media. But the mass media also has its flaws, despite the daunted objectivity and acclaimed commitment to fairness, the mass media has over the years neglected the perspective of the rural areas in information distribution as they write and share information from the standpoint of urban dwellers, not stepping into the shoes of the rural populace to understand how they perceive the information. With the mass media's perspective and viewpoint of urban dwellers any sudden or profound change could have severe consequences in terms of social, political and economic stability of the rural populace, if the mass media turns to be ineffective in disseminating information to the rural people. An example of such change is the corona virus.

Despite the mass media's role in disseminating information to curtail the spread, some scholars postulate that the media also played a negative role in causing panic and spreading fake news about the pandemic especially to the unenlightened in rural communities. They posit that the mass media propagated fallacies, mis-information, and myths about the Covid-19 pandemic and caused panic among the public and spread fake news about the pandemic. Waszak, Kasprzycna - klaszan & Kubanen (2018) found that fallacious reports created severe fear about the pandemic instead of providing hope or direction. Similarly, scholars including Sommariva, Vamos, Mantzarlis, Dao & Tyson (2018); Fung, fu, Chan, chan, Cheung & Abraham (2016) and Waszan et al. (2018) found that the Spread of misinformation about disease outbreaks contributes to its widespread. Therefore, with the above information it becomes necessary to determine the effectiveness of the radio as a channel of communication in disseminating information about pandemics using the corona virus as a case study.

Statement of the Problem

Rural communities produce most of the nation's food and any change that affects the rural communities either negatively or positively will affect the output in terms of production. These changes if negative, such as war, insecurity or pandemic will have an adverse effect on the social, economic and political stability of the rural people. The impact of the recent COVID-19 pandemic on health, society and the economy are far reaching, significant and devastating (M. Shafi, 2021). Globally the disease's impact on local people and businesses is still increasing day by day and is far beyond expectation due to high uncertainty. In comparison with other natural disasters various scholars argue that Covid-19 is unique in terms of its predictability and effects on society; moreover, poor households, especially in rural areas, have been adversely affected to a greater extent (Ali A, et al 2020).

Furthermore, farmers usually face financial constraints, and the pandemic exacerbated the financial stress in rural communities around the globe. In rural areas, the healthcare infrastructure is relatively low, including limited diagnostic facilities, healthcare staff, isolation rooms and Personal Protective Equipment (PPE) which may have adverse effect on the farmers. (Ogunkola et al) As the virus spread, information sharing about the virus grew even faster. Mass media has been the

major tool which the rural populace have been nurtured on the developments and information about the virus.

This work investigated the effectiveness of the radio as a tool of mass media in disseminating information about the pandemic to the rural farmers in Ikwerre local government area of Rivers state. It is against this background that the study answers the following research questions:

What are the socio-economic characteristics of the rural farmers in the study area? To what extent are the rural farmers aware of COVID-19? What are the media sources of Covid-19 information available to rural farmers in Ikwerre L.G.A? What are the prevention strategies communicated by the radio to the rural farmers? What is the perceived effectiveness of the radio versus other sources? What are the constraints to the adoption of covid-19 protocols by farmers in the study area?

Objectives of the study

The broad objective of the study was to ascertain through seeking the views of the public on how efficient and effective radio medium is disseminating Covid-19 information to rural communities in Ikwerre local government area of Rivers state, Nigeria.

Specific objectives of the study were to:

i. describe the socio-economic characteristics of rural farmers in the study area;
ii. determine the level of awareness of the farmers about covid-19;
iii. identify the sources of covid-19 information available to farmers;
iv. ascertain the effectiveness of radio in disseminating COVID-19 information and to examine the prevention strategies communicated;
v. identify the constraints of the radio in disseminating COVID-19 information to farmers in the study area.

Hypothesis of the study

The effectiveness of the radio does not influence the level of awareness of farmers about COVID-19 in Ikwere local government area.

LITERATURE REVIEW

Theoretical Literature

The theoretical underpin of this research work were on agenda setting and perception theories.

Agenda Setting Theory

Researchers have long been intrigued by the media's effect on the national agenda, and how public opinion is formed. Hence the review of the agenda setting theory.

In 1922 Walter Lippman, newspaper columnist, first posed the idea that the mass media shapes public perception with images. Lippman's notion, based on the public's limited first-hand knowledge of the real world, created the foundation for what has come to be known as agenda-setting. The agenda-setting theory maintains that media plays an influential part in how issues gain public attention.

Conceptualized over time, agenda-setting is the dynamic process "in which changes in media coverage lead to or cause subsequent changes in problem awareness of issues" (Brosius & Kepplinger, 1990, Lang & Lang, 1981). Bernard Cohen's statement in 1963 predicted "the press may not be successful much of the time in telling people what to think, but it is stunningly successful in telling its readers what to think about". Whether social or political, local or national, public issues are generated by the media. Consumers not only learn about an issue "but also how much importance is attached to that issue from the amount of information in a news story and its position" (McCombs & Shaw, 1972). McCombs and Shaw's study of media effects on the 1968 presidential campaign nullified previous assumptions that information and how it is presented has

an attitudinal effect inducing behavior changes. Their groundbreaking efforts focused on issue awareness and relevance not behavior and attitude, concluding "the mass media exerted a significant influence on what voters considered to be the major issues of the campaign" (Infante, et al., 1997).

Media drives agenda. Funkhouser (1973) focused his attention on the major issues for each year in the 1960s and further concluded that media agenda drives public agenda, and real-world indicators are less strongly associated with issue salience and media attention (Funkhouser, 1973; Dearing & Rogers, 1996). *Triggering devices*, surmise Cobb and Elder (1972), cue action during a point in time and propel an issue up the policy agenda. Examples of this phenomena are the War on Drugs campaign; the 1989 Exxon *Valdez* oil spill and accompanying environmental issues; and the 1984 Ethiopian famine where NBC broadcast the first pictures of starving children on the evening news triggering massive news coverage for the next 10 months (Dearing & Rogers, 1996). Ironically, during the time of the Ethiopian crisis, Brazil was simultaneously experiencing the worst drought in its history. While the United States and other international governments provided aid, musicians organized benefits raising tens of millions of dollars for food aid, and the news media scrambled to cover the Ethiopian famine, the Brazilians suffered without "international fanfare" (Dearing & Rogers, 1996, p. 70). Logistics proved to be the Brazilians' downfall because "feeding stations were spread across a vast territory, rather than being crowded together, as in Ethiopia," where children lay dying together in concentrated areas convenient for news cameras (Dearing & Rogers, 1996, p. 69).

Significantly, during the pandemic the public's opinion of what the virus is and how deadly it can become was greatly influenced by the mass media, constant reports by the mass media influenced the adherence to COVID-19 protocols such as social distancing and avoidance of crowded area by the general public.

Perception Theory

This theory was propounded by Berelson and Steiner in 1964. The theory assumes that mass communication intends that the audience should pay attention to their messages, learn the content of the message and make appropriate changes in attitudes or beliefs, or produce the desired behavioral responses. The perception theory is of the view that the process of interpreting message tends to be complex and that these goals may be difficult to attain. Barelson and Steine (1964) cited in Anaeto (2008:66) state that "perception is the complex process by which people select, organize and integrate sensory stimulation into a meaningful and coherent picture of the world." Bennett, Hoffman and Prakath (1989) state that "perception is notably active: it involves learning, updating perspective and interacting with the observed". Lahly (1991) cited in Anaeto et al (2008:67) defines perception "as the process by which we interpret sensory data which come to us through our five senses". Research has identified two types of influences on our perception: structural and functional. Structural influence on perception comes from the physical aspects of the stimuli to which we are being exposed. While functional influences are the psychological factors that influence perception, and therefore, introduces some subjectively into the process. Selective perception is about the tendency for people's perception to be influenced by wants, needs, attitudes and other psychological factors. Selective perception tends to play an important role in communication of any sort. In this situation, the theory holds that different people can react to the same messages in different ways. No one can claim that a message will have the same meaning for all receivers. This goes to shows that mass communication is not just a matter of hitting an intended target with an arrow and a communicator, thinking that he/she has accomplished its goal. The message sent out can reach the receiver, who is the target, and still fail to accomplish its purpose because it is subject to the interpretation of the receiver. Severin and Tankard (2000) are of the view that "the process of receiving and interpreting a message is referred to in

communication models as decoding. The process involves perception or the taking in of stimuli through the senses and the subsequent processing of that information".
Comments have been made by Severin and Tankard (2000:80) that "three other processes which are similar to selective perception sometimes come into play in mass communication". These are selective exposure, selective attention and selective retention. Selective exposure is the tendency for individual members of the audience to expose themselves to those messages that are in consonance with their existing attitudes and to avoid those that are not. The notion of selective exposure stems from Festinger's (1959) theory of cognitive dissonance which tends to suggest that one way to reduce dissonance after having made a decision is to seek out information that is in consonance with the decision already taken. Selective attention has to do with the tendency for individual members of the audience to pay attention to those areas of a message that are in agreement with strongly held attitudes, beliefs or behaviors and they try to avoid those sections of messages that go contrary to the strongly held attitudes, beliefs or behaviors. Selective retention is the tendency for the recall of information to be influence by want, needs, attitudes and other psychological factors. Thus, the selective processes can be thought of as four rings of denseness, with selective exposure as the outmost reign, followed by selective attention, and finally selective retention. The relevance of this theory to the study is hinged on the fact that the level at which people will take the campaign message from the broadcast media will depend on the perception they have concerning the message. In a nutshell, people perception of broadcast campaign messages on COVID-109 will go a long way in influencing their behavior towards healthy practices that will keep them safe from COVID-19.

Conceptual Framework
The breakdown below shows the effectiveness of mass media in disseminating COVID-19 information to farmers in Ikwerre local government area, Rivers state. It takes into recognition the media sources of COVID 19 information, prevention strategies communicated and constraints to the prevention strategies communicated.

Dependent variable (A) is the COVID 19 information disseminated to farmers in the study area by the mass media through sources such the television, radio, whatsapp, facebook and other social media platforms. Such information includes the various prevention methods such as hand sanitizing, putting on face masks etc. The observation of the prevention practices communicated in the COVID 19 information depends on how effective the media is in comunicating these information.

Variable (B) which comprises of the various tools used by mass media in disseminating these information. The effectiveness of the media in communicating these practices could be positive or negative leading to their observance of COVID 19 protocols or negligience.

Moderating variable which consist of the level of awareness and literacy level on the part of the farmer could lead to proper or improper utilization of the information disseminated by the mass media. result in positive or negative reaction to the prevention measures of the virus. Also, the availability, competence of the sources, type and level of prevention practices can enhance their willingness to heedt to the available information which will in turn lead to lower risk of contacting the virus. Interveining variable (D) crop farmers' challenges to adoption of COVID 19 prevention practices would determine the effectiveness of the mass media. If the independent variables (B) is applied positively, it will lead to an Outcome (E) (improved living, low rate of COVID 19 patients) in the study area.

Empirical Literature

Saurabh Sambhav (2020), in his research he states that the media works as a bridge between government and society. Media have been recognized as robust power to form how we experience this world. Whether a viewer or a reader, we just close our mind and open our eyes. In this crisis, media played a very significant role in making people aware about the situation, calm the junta and encourage them to do positive action. The different kind of media like digital media and print media with their impact have been presented in his paper. There were many challenges at ground level in spreading information to the people across the nation, some were discussed in the latter part of the research article.

Ayeshar Anwar, Meryem Malik and Anjum Anwar (2020) on their research the role of mass media in public health communications during the covid 19 pandemic, stated that:

In December 2019, a novel pathogen emerged, and within weeks, let to the emergence of the biggest global health crises seen to date. The virus called SARS-2 causes corona virus disease which was named COVID 19 by the world health organization (WHO). The speedy spread of this infection globally became a source of public worry and several unknowns regarding this new pathogen created a state of panic. Mass media became the major source of information about the novel coronavirus. Much like the previous pandemics of SARS (2003), H1N1 (2009), and MERS (2012), the media significantly contributed to the COVID-19 infodemics. In this review, we analyze the role of mass media and public health communications. The COVID19 pandemic highlights multiple social, cultural, and economic issues arising from the media's arguable role. The racial prejudices linked to the origin of the virus prevented collaborators among scientists to find a solution. Media coverage of coronavirus news during geographical lockdowns, extended quarantines and financial and social hardship induced fear and caused psychological stress. Domestic and early abuse upsurge. The unscientific cures and unverified medicines endorsed by the politicians and fake doctors proved harmful. The media played a worldwide role in corona virus disease tracking and updates through live updates dashboard. The media allowed for timely interventions by the center for disease control and prevention and the world health organization, enabling a rapid and widespread reach of public of public health communications. We saw an upward trend for the promotion of health and hygiene practices worldwide by adaptation of safe health practices such as increased hand washing, use of face coverings, and social distancing. Media reinforced illness preventing guidelines daily, and people were encouraged to use telehealth to meet their healthcare needs. Mass media has an imperative role in today's world and it can provide a unified platform for all public health communications, comprehensive healthcare educational guidelines, and robust social distancing strategies while still maintain social connections. It can enable equal access to healthcare, end discrimination and social stigma. The role of media and public health communications must be understood and explored further as they will be an essential tool for combating COVID 19 and future outbreaks. Communication and the masses have a strategic role in responding various problems that exist. In fact, communication and mass can be a form of early education that directly targets the wider community effectively and efficiently. The main discussion in this research is related to the important role of mass communication in the midst of the COVID-19 pandemic, as a form of prevention and early education to the public.

The results of this study are, first, that communication and the masses have a central role in responding to the COVID-19 pandemic. Second, that the problems caused by the COVID-19 pandemic which has become a global problem have the potential to trigger a new social order or reconstruction, thus it is necessary to have close communication between stakeholders. (Almukarramah , Ainal Fitri, and Fitri Melia Sari 2020). Mass media technology plays a very important role in the advancement of developing nations. In this context, Sri Lanka and India have made significant progress in using mass media in rural areas.

On the Indian side, proletarian organizations supported by the government and UN organizations have begun to share a bottom-up approach to increase their progress plans in rural areas and provide functional virtualization with computers. communication arrangements and internet Access Knowledge Center (AKC) growers, including using the Mike system. These AKC's from the internet have played an important role in growing growers' capabilities. However, the internet system has created many opportunities for society. Using the internet system, growers have gained new knowledge about yields from several markets in their area and from large markets in the country. Also, get the latest knowledge about agriculture to improve the latest methods. The internet offers growers the opportunity to obtain new information and new knowledge on the market. For the most part, growers are using their email and internet to communicate with friends and family in other parts of the country. The internet is very well known among Indian growers. Currently, growers are using various websites to gain important knowledge about the appropriate usage of pesticides in their agricultural areas. The Korean Agriculture, Forestry and Fisheries Information Service (AFFIS) has also played an important role in providing better information to growers and fishermen. The management education system was recognized in 2002. The key purpose of the department is to deliver growers and fishermen with offline and online education programs and incentive information facilities. Growers and fishermen are provided with facilities for learning and learning through internet facilities. Using internet growers has developed their information and skills, gained more knowledge, and used the latest technology in agriculture and rural areas.

METHODOLOGY

Area of the Study

The study was conducted in Ikwerre Local Government Area of Rivers State Nigeria. Its coordinates are 5° 3' 19" North and 6°55'21" East. Ikwerre is a Local Government Area of Rivers State, Nigeria, located northwest of Port Harcourt. It has an area of 1,380 km^2 and a population of 188,930 (male and female) as stated by the Rivers state population census, 2006. The local government is made up of twelve communities namely: Aluu Omagwa, Omudeme, Elele, Omuanwa, Apani, Ipo, Omerelu, Igwuruta, Ubima, Ozuaha and Isiokpo which is it's headquarter. The major language is Ikwerre language and the predominant occupation of the people is farming.

Population of the study

The study population consisted mainly of registered crop farmers in Ikwerre LGA of Rivers state. According to Rivers State Agricultural Development Projects (ADP's), department of rural institution development (2010). Manual of registered farmers there are 240 registered crop farmers in Ikwerre, 100 farmers were randomly selected from the total of 240.

Sampling Procedure and Sample Size

The focus of the study was crop farmers in Ikwerre Local government area of Rivers state.
The LGA is made up of twelve (12) communities and towns. These communities include: Isiokpo, Omagwa, Omudeme, Elele, Omuanwa, Apani, Ipo, Omerelu, Igwuruta, Ubima, Ozuaha and Aluu.
Cluster random sampling (cluster random sample is a subset of individuals chosen from a larger set in which a subset of individuals is chosen randomly, all with the same probability) was used to select 100 farmers as the sample size from the six (6) communities from the list of above resulting to a total of 100 respondents from the selected communities. Selection was made considering the population in each selected community hence the varying figures in the data set.

Table 1: Summary of the Sampling Procedure for the Study Area

S/No.	Communities in Ikwerre L.G.A	Selected communities	Sample size

1.	Isiokpo	Isiokpo	20
2.	Omudeme	Omagwa	15
3.	Omagwa	Elele	15
4.	Omuanwa	Aluu	20
5.	Elele	Igwuruta	20
6.	Apani	Ubima	10
7.	Aluu		
8.	Ipo		
9.	Igwuruta		
10.	Omerelu		
11.	Ubima		
12.	Ozuaha		
Total	**12 communities**	**6 communities**	**100**

Methods of Data Collection

The data was gathered from primary sources by the researcher. Farmers in Ikwerre LGA was be surveyed using a structured questionnaire. Individual copies of the questionnaire was distributed to the respondentss in their respective communities. There were three (3) sections to the structured questionnaire. The first section included questions about the respondents' socio-economic status, including gender, age, marital status, family size, educational level, occupation, and income size. The second section included questions about crop farmers' level of COVID 19 awareness and media sources of COVID 19 information. The third section focused on the media's effectiveness in communicating COVID 19 information and the barriers to crop farmers getting COVID 19 information.

Method of Data Analysis

Data analysis was done using descriptive statistical tools which include; mean, frequency and percentage to present the farmers socio-economic characteristics, determine the level of awareness of the farmers about covid-19; identify the sources of covid-19 information available to farmers in the study area; and examine the prevention strategies communicated by the radio and its effectiveness.

A four likert scale type with options: Very great extent (VGE) = 4, A (GE)=Great extent 3, Little extent (LE)= 2, No extent (NE) = 1 was used as a rating scale in determining the constraints in accessing information through the use of radio in the study area.

The values were added to give 10 and divided by 4 to get 2.50. This served as the descision rule. Any variable above and equals 2.50 was regarded and accepted as effective, while variables below 2.50 was seen as less effective.

RESULTS AND DISCUSSION

Socio-Economic Characteristics of the respondents

Descriptive statistics of the socio-economic characteristics of the respondents in the study area are presented in Table 2.

Age

Table 2 below shows that majority (48.0%) of the respondents were between the ages of 51 - 60years, 28% were between the ages of 41-50years, 10.0% were between the ages of 31-40years, while 9% and 5% of the respondents were between the ages of 21-30years and 61–70years respectively. The mean age of the respondents was 44 years. This implies that respondents were in their youthful and active ages in which productive energy is very high. This result is in

consonance with the findings of Suleman (2012) who reported that 92% of the cassava processors interviewed were between 21and 60 years old.

Marital Status
Based on marital status, result in Table 2 below revealed that majority (52%) of the respondents were either widowed, (38.0%) of the respondents were married, only 10% were single. This agrees with Ekong (2003) who asserted that majority of married women or widows in rural areas are into agricultural activities. This also agrees with the findings of Bello *et al.* (2013) who in their study of rural women processing cassava in Doma Local Government area of Nasarawa State found that 85% of the respondents were married. Widows/Widowers are married people who have lost their spouses and have family responsibilities in terms of income to meet the family needs whicn they are now expected to carry out alone without their partners unlike their unmarried counterparts.

Sex
Data in Table 2 below also showed that majority (68.0%) of the respondents were females while (38%) were males. This suggests that female farmers dominated cassava farming in the study area. The result is in consonance with Nwaobiala, (2018) that more women were involved in small holder cassava farming in Abia and Imo states, Nigeria.

Educational level
The distribution of the respondents according to their educational levels showed that most (49%) of the respondents had obtained primary education, about 31% had secondary education, 14% had tertiary education and 6% had no formal education. This implies that the farmers, to an extent, were literate and can provide responses to questions bothering on the effectiveness of the mass media in disseminating Covid-19 information to rural communities. Sofoluwe *et al.* (2011) confirmed that education influences people's perception and adoption of innovations.

Farming experience
The study revealed that majority (51%) of the farmers have been into the farming business for over 20 years. 21% of the participants was between 16 to 20 years in farming. Also, 10% have a farming experience between 11 to 15 years while only 9% have farming experience for 1 to 5 years and 6 – 10 years respectively. This is in agrees with the findings of Bakut (2013) who asserted that farmers with long years of farming experience would be conversant with the constraints associated with farming and also seek for information on current trends in the world.

Household size
The result showed that respondents with a good proportion (39%) of the respondents had a household size between 5 - 8 persons, 38% had a size between 9 -12persons, 21% had a household size of 1-4 persons and only 2% of them had a house hold size of 13persons and above. The mean household size of the respondents was 7 persons. A considerably large household size typical of rural setting in developing countries like Nigeria could be a useful source of labour for farming activities. This result concurs with Usman, Salihu and Musa (2016) as they affirmed that household size is a human capital available that contribute to family labour.

Monthly Income
The result from Table 2 below further reflects that majority (54%) of the farmers earned between ₦20,000 - ₦30,000 monthly, 27% earned between ₦31,000 to ₦40,000, 14% earned between ₦41,000 to ₦50,000, 3% earned between ₦51,000 to ₦60,000 while only 2% earned between ₦61,000 and above monthly with a mean monthly income of ₦27,660.00 This indicates that

cassava farming is a profitable venture. The income levels of farmers depend largely on combination and intercrop of crop varieties and farm size (Anyanwu, Agwu and Okoroji, 2016).

Table 2: Socio-economic characteristics of Crop farmers in the study area (n = 100)

Variables	Frequency	Percentage (%)	Mean
Age (years)			
21 - 30	9	9.0	
31 – 40	10	10.0	
41 – 50	28	28.0	44 years
51 – 60	48	48.0	
61 – 70	5	5.0	
Marital Status			
Single	10	10.0	
Married	38	38.0	
Widow/widower	52	52.0	
Sex			
Male	32	32.0	
Female	68	68.0	
Educational level			
No formal Education	6	6.0	
Primary	49	49.0	
Secondary	31	31.0	
Tertiary	14	14.0	
Farming Experience (years)			
1 – 5	9	9.0	
6 – 10	9	9.0	
11 – 15	10	10.0	16 years
16 – 20	21	21.0	
21 years above	51	51.0	
Household size (Persons)			
1 – 4	21	21.0	
5 – 8	39	39.0	
9 – 12	38	38.0	7 persons
13 and above	2	2	
Monthly Income (₦)			
20,000 – 30,000	54	54.0	
31,000 – 40,000	27	27.0	
41,000 – 50,000	14	14.0	₦27,660.00k
51,000 - 60,000	3	3.0	
61,000 and above	2	2.0	

Awareness level of Covid 19 by the Respondents

The Awareness levels of the respondents about Covid-19 are presented in Table 3 below using frequencies and percentages. Results in Table 3 below reveals that the respondents were aware of Covid-19 through the Mode of transmission and its Symptoms. Using the mode of transmission, majority (84%) of the respondents attested that they knew that Covid-19 can be transmitted through Sneezing, 83% attested that it can be transmitted through Hugs, 65% through public gatherings, 52% through Going to the farm, 48% through Handshakes and 34% through cooking food. Under Symptoms of Covid -19, 86% of the respondents agreed that they were aware that

Covid-19 causes Fever and Difficulty in breathing respectively, 85% agreed that it causes Cough, 83% attested that it causes Sore throat, 80% of them agreed that it causes tiredness, 79% loss of taste and smell, 78% said it causes Red or Irritated eyes, 77% Aches and pains, 75% Skin Rash while 74% agreed that it causes Diarrhoea.

Table 3: Percentage Distribution of Awareness level of Covid 19 by crop farmers (n = 100)

Symptoms of covid 19	Yes
Fever	86
Cough	85
Tiredness	80
Loss of taste or smell	79
Sore throat	83
Headache	80
Aches and pains	77
Diarrhea	74
Skin rash	75
Red or irritated eyes	78
Difficulty in breathing	86
Chest pain	63

Mode of Transmission

Under both the mode of transmission and symptoms of Covid-19, a great number of the respondents are aware of the disease.

Table 4: Mode of Transmission

Mode of Transmission	Yes
Hand Shake	48
Hugs	83
Public gatherings	65
Cooking food	34
Going to the farm	52
Sneezing	84

Media sources of Information about Covid-19 available for the Respondents

The Media sources of information about Covid-19 by the respondents are presented in Table 5 below using frequencies and percentages.

Findings in Table 5 below reveals that a majority (77%) of the respondents used Radio as a source of information on Covid-19, 62% of them obtained their information from Newspapers, 23% got theirs through the Television, 9% from Magazines and 8% got their information from the Social Media. Radio is a useful source of agricultural information to farmers and as well constitutes methods of notifying farmers of new developments and emergencies (Khan, Rahman and Uddin, 2017). This is also in consonance with Swanson and Rajalathi (2010) that opined that Mass media

in agricultural information dissemination generally, are useful in reaching a wide audience at a very fast rate.

Table 5: Distribution of The Media sources of Information Available for Crop Farmers in the study area (n=100)

Sources of information	Yes
Radio	77
Television	23
Newspaper	62
Magazine	9
Social media rate	8

Covid – 19 Prevention Practices Disseminated to the Respondents and its Effectiveness

The Covid-19 prevention practices disseminated to the Crop farmers and its effectiveness is presented in Tables 6 respectively using frequencies, percentages, and mean scores.

Table 6: Covid – 19 Prevention Practices Disseminated to the Respondents and its Effectiveness

	Prevention practices communicated	Yes
1	Washing of hands	100
2	Putting on face masks	99
3	Regular hand sanitizing	96
4	Avoid contacts with infected persons	88
5	Avoid crowded areas	89
6	Stay 10 metres apart	89
7	No handshakes	85
8	No hugs	84

Effectiveness of Radio in disseminating information about Covid- 19 mitigation strategies

Findings in Table 7 below show the Covid-19 Prevention practices in Table 4.4.1 and the Effectiveness of Radio in disseminating this information in Table 7.

Results in Table 7 below reveal that all (100%) of the respondents agree that washing of hands is a prevention practice from Covid-19 infection, 99% of them identified, 99% of them identified Putting on of face marks as a prevention practice, 96% used Regular hand sanitizing, 89% of them observed Avoid crowded areas, and Stay Ten meters apart respectively.85% observed No handshakes and 84% agreed that No hugs were prevention practices. This indicates that the respondents were very much aware of prevention practices used all over world to avoid Covid-19 infection and is in line with world best practices.

Table 7: Effectiveness of Radio in disseminating information about Covid- 19 mitigation strategies

Media Effectiveness	Mean	Decision
Creation of awareness	2.59	Effective
Timely delivery of information	2.13	Effective
Access to covid 19 related information	2.12	Effective
Replication of information	2.12	Effective
Linkage to NCDC and health institutes	1.79	Not Effective

Decision Rule ≥ 2.0 – Effective; ≤ 2.0 Not effective

Constraints Faced by the Rural Farmers in accessing Covid19 information through the Radio

The constraints to accessing Covid 19 information on the radio to rural communities were also analyzed using a four-point likert scale type as shown in the Table 8 below

Table 4.5 reveals that the respondents agreed to all the variables listed as constraints faced by them in accessing Covid-19 information. Of all the constraints listed, High cost of getting a radio ($\bar{x}$ =3.54) ranked highest, followed by Lack of breakdown information (($\bar{x}$ =3.34), Erratic power supply ($\bar{x}$ =3.22), and Lack of visual content ($\bar{x}$ =2.70). However, Poor access to network ($\bar{x}$ =2.39), and No information on the radio stations ($\bar{x}$ =1.89) were not regarded as constraints because their mean scores were ≤ 2.5 in consonance with the Decision rule. This result collaborates with the work of Antwei et al (2022) that attested that patronage of farm radio programmes is associated with radio set ownership, educational level and age of farmer. The study recommends that farmers should be encouraged to own radio sets and continue to rely on farm radio programmes for agricultural information.

Table 8: Constraints Faced by Rural Crop Farmers in accessing Covid19 information through the Radio in the study area (n=100)

Constraints	Mean	Decision	Rank
Lack of breakdown of information for farmers consumption and understanding	3.340	Constraint	2nd
Erratic power supply	3.220	Constraint	3rd
Poor access to network	2.390	Not A Constraint	5th s
No information on the radio stations	1.890	Not A Constraint	6th
Lack of visual content	2.70	Constraint	4th
High cost of getting a radio	3.540	Constraint	1st

Responses ≥ 2.5 – Great Extent; ≤ 2.5 –No Extent

Test of Hypothesis

H_0: The use of radio does not influence the awareness level of COVID-19 among crop farmers in Ikwerre Local Government Area.

Correlations Analysis

Correlation analysis was performed to identify the relationship between the socio-economic characteristics of the crop farmers and the use of radio to influence the awareness level of Covid 19. Results of correlation analysis are shown in Table 4.6.

The correlation analysis in table 9 shows that the effectiveness of radio in disseminating among crop farmers in the study area has significant relationship with sex, marital status, farming experience and income of crop farmers (p-value < 0.05).

Table 9 Relationship between Socio-economic characteristics of Crop farmers and the effectiveness of radio in disseminating covid-19

Variables	n	(%)	r	p-value
Age (years)				
21 - 30	9	9.0		
31 – 40	10	10.0		
41 – 50	28	28.0		
51 – 60	48	48.0		
61 – 70	5	5.0	0.141	0.160
Marital Status				
Single	10	10.0		
Married	38	38.0		
Widow/widower	52	52.0	0.363	0.000
Sex				
Male	32	32.0		
Female	68	68.0	0.324	0.000
Educational Qualification				
No formal Education	6	6.0		
Primary	49	49.0		
Secondary	31	31.0		
Tertiary	14	14.0	-0.183	0.073
Farming Experience (years)				
1 – 5	9	9.0		
6 – 10	9	9.0		
11 – 15	10	10.0		
16 – 20	21	21.0		
21 years above	51	51.0	0.337	0.001
Household size (Persons)				
1 – 4	21	21.0		
5 – 8	39	39.0		
9 – 12	38	38.0		
13 and above	2	2	-0.145	0.150
Monthly Income (₦)				
20,000 – 30,000	54	54.0		
31,000 – 40,000	27	27.0		
41,000 – 50,000	14	14.0		
51,000 - 60,000	3	3.0		
61,000 and above	2	2.0	-0.289	0.004

CONCLUSION

The study has shown that the radio as a media source has proven to be more effective in the dissemination of covid-19 information to farmers in Ikwerre Local Government as compared to other media sources such as magazine, Newspapers, television, social media e.tc

The study also revealed that the respondents were very much aware of prevention practices used all over world to avoid Covid-19 infection and is in line with world best practices such as regular washing of hands, use of sanitizers, avoiding crowded areas, and staying 10m apart. Despite the high cost of getting a radio and its inability to display visual content, the farmers agreed that they got useful information about the covid-19 pandemic from the radio.

The major constraints to the effectiveness of the radio in disseminating covid-19 information as shown in the study are High cost of getting a radio ($\bar{x}$ =3.54) ranked highest, followed by lack of breakdown information (($\bar{x}$ =3.34), erratic power supply ($\bar{x}$ =3.22), and lack of visual content ($\bar{x}$

=2.70). From the findings of this study, it can be deduced that the radio was effective in disseminating covid-19 information to the rural farmers in the study area.

RECOMMENDATIONS

The study, therefore, recommends that;

1. Media workers should endeavor to breakdown information for proper understanding by rural people, especially when they are the target audience of such information.
2. Rural farmers should be encouraged to transition into commercial agriculture, so as to boost their economic capabilities. This would enable them purchase electronic devices, such as the radio for timely access to information.
3. The Government should ensure that rural communities have access to constant electricity as this also contributes to the level at which they access information via electronic mass media devices.
4. Farmers should be encouraged to own radio sets and continue to rely on farm radio programmes for agricultural information.

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