Original Research Article

Public Perception of Radio Surveillance in the Distribution of COVID-19 Palliatives to Smallholder Farmers in Nigeria

Abstract

This study was carried out to examine surveillance role of radio in the distribution of the COVID-19 palliatives among smallholder farmers in Nigeria. The methodology adopted in the study was the survey which questionnaire was used as the research instrument for data collection. The data collected in the study was analyzed using descriptive statistics. The study revealed that monitoring fertilizer distribution to smallholder farmers was the major surveillance role played by the radio while monitoring the distribution of improved seeds, finance, soft loans, agriculture mechanization services, and agric technology services to farmers were other surveillance responsibilities of the radio in distribution of the Covid-19 palliatives to farmers in Nigeria. The study also identified breaking news as format predominantly used by the radio in monitoring distribution of the Covid-19 palliatives while combination of breaking news, news investigation, news analysis, documentary and entertainment education to collectively monitor the Covid-19 palliatives distribution were observed to be less prioritized in the surveillance responsibility of the radio. Majority of the smallholder farmers (86%) expressed their dissatisfaction with the extent to which radio was involved in monitoring distribution of the Covid-19 palliatives to them in Nigeria. As a result, only small proportion of them (13.7%) has significant knowledge of how to access the COVID-19 palliatives in the country. The study concluded by stating that radio still remains a medium for the dissemination of agricultural information its impact in monitoring the distribution of the Covid-19 palliatives is not significantly felt among smallholder farmers in Nigeria

Keywords: Public Perception, Radio Surveillance, Distribution, COVID-19 Palliatives, Smallholder Farmers

Introduction

Keeping watch over the environment in order to cover and report its activities to the public for necessary action is one of the key responsibilities of the mass media in every society. By keeping surveillance over the environment, the mass media "… highlight aspects of the society and report them as news" (Chigozie (2009, p. 129). They (mass media) also "… bring news of social, economic and political developments, dangers that are threats to national stability, threats to public welfare, environmental pollution and degradation as well as scandals of varying dimensions to the people" (Josephat, 2008, p. 25). In the surveillance function of the media, "the press plays the role of an observer, which is a necessary component for enforcing economic, political, cultural and even moral stability" (Mu'azu, 2002, p. 49).

Radio is one of the channels of mass communication that experts attested is predominantly used among farmers for diverse agricultural information due to its unique attributes (Adio, Abu, Yusuf & Nansoh, 2016; Akosa, 2012; Bachmann and Kiteme, 2015; Familusi and Owoeye,

2014; Farm Radio International, 2016; Folitse, Osei, Dzandu & Obeng-Koranteng, 2016; Fombad and Veli Jiyane, 2019; Ihechu, 2019; Iman, 2020; Johnson and Rajadurai, 2020; Maputseni, 2006; Myers, 2008; Nazari and Hasbullah, 2010; Ridwan, Suleiman & Fatonji, 2014; Wulystan, 2018; Zossou, Vodouhe, Van Mele & Lebailly, 2012). Radio is among the most widely used media for disseminating information to rural audience across Africa together with mobile phones, as a result of the increased ownership and widespread use among farmers (Hudson, Leclair, Pelletier & Sullivan, 2017); Sousa, Nicolay & Home, 2016); Sullivan, 2011). Hence, they offer the opportunity to reach often remote, dispersed and poorly serviced farmers, by overcoming barriers of distance and poor road infrastructure (Baumüller, 2018). It is however, not certain about the surveillance role of the radio in COVID-19 palliatives distribution to farmers, particularly smallholder famers which experts have said they have been badly affected by the outbreak of this novel pandemic (Adebayo and Milu, 2020; Chibuzo, Onyeneke, Njoku, Azuamairo, Atasie & Munonye, 2020; CODE, 2020; Federal Ministry of Health, 2020; Resnick, 2020; Stanley, Nkporbu & Stanley, 2020; Winter, 2020); hence, our reason for this study.

Problem Statement

Evidence is sufficient to show that the outbreak of the COVID-19 pandemic affected farmers and has posed a great threat to food security if sincere, drastic and immediate measures are not taken by relevant stakeholders including the mass media (Abbas, Ibrahim, Ali, Yakub & Ilyas, 2020); Adebayo and Milu, 2020; Adedayo, Sennuga & Sennuga, 2020; Chibuzo, Onyeneke, Njoku, Azuamairo, Atasie & Munonye, 2020; CODE, 2020; Ekpenyong and Omere, 2020; FOA, 2020; Global Alliance for Improved Nutrition, 2020). In order to cushion the effect of the COVID-19 pandemic on the citizens, the Federal Government of Nigeria had announced a number of responses: N500 billion COVID-19 Crisis Intervention Fund, 50 billion Naira CBN intervention fund for households and MSMEs, 20,000 Naira four months conditional cash transfer to the country's poorest, reduction in price of fertilizers as subsidy to farmers etc (CODE, 2020). COVID-19 palliative programme is part of the government's initiatives and farmers are part of the programme who remain "the powerhouse of food production in the country and have been feeding over 200 million mouths on daily basis to help mitigate the impact of the pandemic on agriculture in general and the production of food in particular" (Okafor in Ewepu, April 13, 2020).

The role of the media, particularly the radio in ensuring that information about agricultural programmes is disseminated to farmers has been established by a number of scholars (Adio, Abu, Yusuf & Nansoh, 2016; Akosa, 2012; Bachmann and Kiteme, 2015; Familusi and Owoeye, 2014; Farm Radio International, 2016; Folitse, Osei, Dzandu & Obeng-Koranteng, 2016; Fombad and Veli Jiyane, 2019; Ihechu, 2019; Iman, 2020; Johnson and Rajadurai, 2020; Maputseni, 2006; Myers, 2008; Nazari and Hasbullah, 2010; Ridwan, Suleiman & Fatonji, 2014; Wulystan, 2018; Zossou, Vodouhe, Van Mele & Lebailly, 2012). However, it is not clear how the radio monitors the distribution of COVID-19 palliatives to smallholder farmers in Nigeria, hence, this study becomes necessary in order to bridge this gap by investigative the extent to which the radio is involved in monitoring distribution of the COVID-19 palliatives to smallholder farmers and the value of such surveillance farmers' knowledge of how to access such palliatives in Nigeria.

Objectives of the Study

The overall objective of this study is to examine the surveillance role of the radio in the distribution of the COVID-19 palliatives to smallholder farmers in Nigeria. The particularly objectives therefore include:

i. To find out particular COVID-19 palliatives that the radio is involved in monitoring their distribution to smallholder farmers in Nigeria.
ii. To determine various ways through which the radio is involved in monitoring the distribution of the COVID-19 palliatives to smallholder farmers in Nigeria.
iii. To examine the extent to which the radio is involved in monitoring the distribution of such palliatives for farmers' accessibility in Nigeria.
iv. To ascertain the influence of the radio's surveillance role on farmers' knowledge of how to access the COVID-19 palliatives in Nigeria.

Research Questions

The following questions are posed for answering in this study:

i. What particular COVID-19 palliatives do the radio is involved in monitoring their distribution to smallholder farmers in Nigeria?
v. In what specific ways do the radio involve in monitoring the distribution of the COVID-19 palliatives to smallholder farmers in Nigeria?
ii. To what extent does the radio is involved in monitoring the distribution of such palliatives for farmers' accessibility in Nigeria?
iii. What influence does the surveillance role played by the radio have on farmers' knowledge of how to access the COVID-19 palliatives in Nigeria?

Literature Review

Coronavirus disease 2019 (COVID-19) is an infectious disease of humans caused by a newly discovered coronavirus: Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). The most common symptoms of COVID-19 are fever, tiredness, dry cough and shortness of breath or difficulty in breathing (WHO, 17 April 2020; Centers for Disease Control and Prevention, 2020). According to available reports (WHO, 2020; Yang X. et al, 2020; Zhou F. et al, 2020), some patients may have aches and pains in joints or muscles, repeated shaking with chills, nasal congestion, runny nose, sore throat, diarrhea, and loss of smell and taste in some cases. In severe cases, COVID-19 can be complicated by acute respiratory disease syndrome, sepsis and multiple organ failure (Yang X. et al, 2020). Most COVID-19 patients (85 percent) experience mild or uncomplicated illness, approximately 14 percent develop severe disease requiring hospitalization and 5 percent will require intensive care (The Novel Coronavirus Pneumonia Emergency Response Epidemiology Team, 2020).

The first case of Corona virus was announced by the World Health Organization (WHO) on 31st December, 2019 in Wuhuan, Hubei region of China. The total number of confirmed cases of Covid 19 in the world as at 10:10am CET, December 8, 2020 was 66,729,375, including 1,535,982 deaths (WHO, 2020). In Africa with a total number of 1, 556, 168 confirmed cases, Nigeria has 69, 255 confirmed cases with 1, 180 deaths as at 10:10am CET, December 8, 2020 (WHO, 2020). Nigeria recorded her index case on 27th February, 2020. Since then, there has been increasing number of reported cases of Covid-19 in the country (NCDC, 2020) with grave

impact on agriculture and food security. According to the FAO (2020) report, the outbreak of the COVID-19 pandemic has worsened an already bad situation in Nigeria. Nigeria food security analysis shows that 7 million Nigerians will be food insecure by August 2020 (FAO, 2020). About 40 percentage (82 million) of Nigerians live in poverty. With a score of 27.9, Nigeria is ranked 93rd out of 117 countries on the 2019 Global Hunger Index. The United Nations 2018 Human Development Index (HDI) placed Nigeria on 158th out of 189 countries with a HDI index of 0.534. About 47.62 % (98,156.651) of these Nigerians live in the rural area and may be exposed to the adverse effects of the pandemic (NBS, 2020; UNDP, 2018). More so, rural households bear a good proportion of the cost of pandemics as an infected person usually travels to their places of origin when they are sick (Chibuzo, Onyeneke, Njoku, Azuamairo, Atasie & Munonye, 2020).

A lot of other studies which captured the impact of the COVID-19 on agriculture and food security attest to the fact that the pandemic has severe effect on and a thread to food security if drastic measures are not taken (Abbas, Ibrahim, Ali, Yakub & Ilyas, 2020; Adebayo and Milu, 2020; Adedayo, Sennuga & Sennuga, 2020; Chibuzo, Onyeneke, Njoku, Azuamairo, Atasie & Munonye, 2020; CODE, 2020; Ekpenyong and Omere, 2020; FOA, 2020; Global Alliance for Improved Nutrition, 2020). As part of the measures to cushion the effect of the COVID-19 pandemic on agriculture and food security, the government has come up with different palliatives measures that would empower farmers and boost agricultural production. Such palliatives are informed of agricultural inputs including quality seeds, fertilizers, access to finance, soft loans, extension services, mechanization, technology, and others (Okafor in Ewepu, 2020). In their study to assess government response to socioeconomic impact of Covid-19 pandemic in Nigeria, Olu and Irabor (2020) found that even as there are bearings between Covid-19 pandemic and low socioeconomic livelihood in Nigeria the palliative measures introduced by the government to minimize the effect of the pandemic are largely ineffective owing to poor coordination, human right violations as well as inadequate fiscal policy. While Eranga (2020) also established in the study how the process of distribution the Covid-19 palliatives in Nigeria had been politicized.

The role of the media as surveyors of the environment and government to ensure proper functioning has been affirmed by previous scholars (Amuchiazi, 1999; Chigozie, 2009; Josephat, 2008; Mu'azu, 2002; Odigbo, 2003; Udeze and Chukwuma, 2013). Odigbo (2003), citing asserts that:

> The media further exercise surveillance over the environment and alert members of the society to the realities of their environment. The media normally report what is wrong in the society and take bold and firm stand on its inadequacies like drug addictions, fake drug importation, hard drug trafficking, armed robberies, political thuggery, hired assassinations, smuggling, environmental degradations, economic sabotage, lack of basic social amenities, high unemployment rate, downturns in education, poor healthcare, the outbreak of epidemics and so on and so forth in their watchdog and surveillance functions (p. 178).

It shows from the above that the media keep watch over the society with a view to reporting its activities to the public for proper action. For Josephat (2008, p. 25):

> The surveillance function or role of the media presupposes that the media are the eyes and ears of the public. The media provide information and alert their

> heterogeneous audiences of the changes that take place around them. The media consistently survey the environment and convey salient issues or mediated messages to the audience in order to reduce uncertainties and consequently react to the conflict or change in a rational way. The media in discharging their surveillance function, usually scout round the environment and bring news of social, economic and political developments, dangers that are threats to national stability, threats to public welfare, environmental pollution and degradation as well as scandals of varying dimensions to the people.

In citing Dominick (1990), Udeze and Chukwuma (2013) explained that the surveillance role of the media is of two types-the instrumental surveillance and the warning/beware surveillance (which are both relevant to our study). The instrumental surveillance helps the mass media to transmit information that is useful and helpful to the public. Some of this news include what films are playing at the local theatres, stock market prices, new products, latest fashion, ideas, recipes, teen's fads, and many more related issues. On the other hand, warming or beware surveillance occurs when the media inform us about threats from natural disasters like hurricanes, erupting volcanoes, and other negative happenings around us like depressed economic conditions, increasing inflation, or military attacks (Dominick, 1990 in Udeze and Chukwuma, 2013).

Radio is a known channel of mass communication whose impact on different areas of agricultural development at different times in different places has been investigated by a number of scholars with varying results (Abdul-Aziz, Salau & Baba, 2013; Adamides and Stylianou, 2018; Adio, Abu, Yusuf & Nansoh, 2016; Akosa, 2012; Ango, Yakubu & Usman, 2013; Anjolaoluwa and Oyelami, 2019; Bachmann and Kiteme, 2015; Familusi and Owoeye, 2014; Farm Radio International, 2016; Folitse, Osei, Dzandu & Obeng-Koranteng, 2016; Fombad and Veli Jiyane, 2019; Ihechu, 2019; Iman, 2020; Johnson and Rajadurai, 2020; Ladigbolu and Olajide, 2018; Maputseni, 2006; Myers, 2008; Nazari and Hasbullah, 2010; Odiaka, 2011; Oguche, 2016; Ogunsola, Ogunsola, Alarape, Oloba & Osalusi, 2019; Oyeyinka, Bello & Ayinde, 2014; Ridwan, Suleiman & Fatonji, 2014; Uzuegbu & Naga, 2016; Silvestri, Musebe, Baars, Ganatra & Romney, 2020; Wulystan, 2018; Yahaya, Adamson & Kareem, 2018; Zossou, Vodouhe, Van Mele & Lebailly, 2012). For instance, in 2016, a study was conducted in Tanzania to assess the impact of radio and SMS in scaling-up smallholder participation in legume-based sustainable agricultural intensification (SAI) practices and technologies. The results show that both awareness and adoption are boosted if SMS supports radio campaigns. However, radio alone is the most cost-effective approach. Each dollar spent on the radio campaign results in 2.1 farmers that have adopted at least one new practice, compared with 0.5 farmers for SMS and 0.4 farmers for radio and SMS combined. Other factors were also important in facilitating uptake of legume-based SAI practices, such as gender, age, education and land size, but were not statistically significant when rated against the communication channels used (Silvestri, Musebe, Baars, Ganatra & Romney, 2020).

Anjolaoluwa and Oyelami (2019) found in their study on "*Listenership of Latoju Oja Radio Extension Programme among Farmers in Oyo State, Nigeria*" that a high proportion (80.0%) of the farmers were satisfied with the time of airing of latoju oja programme and considered it to be a useful source of information with a favourable disposition about the programme but though found listenership to be low among a majority (58.9%). Ogunsola, Ogunsola, Alarape, Oloba &

Osalusi (2019) in their study on the "*Effectiveness of broadcast Agricultural Programmes on Agricultural Development among Farmers in Akoko South West Local Government Area of Ondo state, Nigeria"* revealed that farmers have a highly positive (62.9%) of the effect of broadcast agricultural programmes on agricultural development and concluded that broadcast agricultural programmes is effective in ensuring agricultural development in the study area.

In their study on the "Evaluation of the Radio as an Agricultural Information Source in Rural Areas" Adamides and Stylianou (2018) found that half of the farmers listen to the radio programme while older farmers were more likely to be listeners. Abdul-Aziz, Salau & Baba (2013) in studying "*Farmers' Perception of NAERLS Agricultural Radio Programmes in Northern Nigeria*" revealed that the general perception of the respondents on agricultural radio broadcast was positively correlated; age, gender, and type of farm work also positively and significantly correlated with radio listening. Change in location (that from Kaduna to Katsina and vice versa) negatively however correlated with listening level; also, there was higher level of perception among Kaduna farmers than Katsina farmers. Ango, Yakubu & Usman (2013) studied the "*Farmers' Perceptions on the Role of Mass Media in Sustainable Agricultural Development: A Case Study of the Northern Zone of Sokoto Agricultural Development Project (S.A.D.P.), Nigeria*" and found that access to agricultural programs was via television and radio and this manner of disseminating agricultural programmes was highly accessible, convenient, effective and highly beneficial, while lack of electricity was the major problem that hampered the dissemination of agricultural information. Ladigbolu and Olajide (2018) in their study on "*Farmers' proclivity to use soap opera for sourcing agricultural information in Southwest Nigeria*" revealed that there was a significant correlation between farmers' perceived benefits ($r = 0.36$; $P = 0.00$) and proclivity to use soap opera for sourcing agricultural information. Farmers' positive proclivity to use soap implies that soap opera strategy has potentials to benefit farmers as a source of agricultural information; therefore, soap opera should be considered as veritable avenue for agricultural information dissemination in Southwest Nigeria.

Oyeyinka, Bello & Ayinde (2014) conducted the study on "*Farmers Utilization of Farm - Radio Programmed for Marketing of Agricultural Commodities in Oyo State, Nigeria*" and found that majority of the farmers (84.0%) used the radio agricultural programme as their agricultural market information source, indicating that farmers awareness and use of farm radio for marketing agricultural commodities had a positive relationship. Constraints however, had a negative relationship with farmers' use of farm-radio for marketing agricultural commodities. Odiaka (2011) in the study on "*Contribution of Farm-Radio Broadcasts to Yam Output in Benue State, Nigeria*" revealed that there was a significant difference between yield of yams before and after listening to radio, indicating farm-radio broadcasts' contribution to productivity. Oguche (2016) on the "*Use of radio as a tool for promoting integrated pest management among farmers in Shika, Kaduna State, Nigeria*" concluded that people of Shika do not have requisite agricultural information needed for pest control hence, there was high rate of pest attacks on their farms, the radio stations in the area rarely broadcast issues related to pest control, while there was low extension attention to the community. Improved access to agricultural information on Radio, through the Hausa language was therefore recommended as being a sure way for pest control needed for improved agricultural productivity in Shika community. Uzuegbu & Naga (2016) in their study on "*Information Communication to Rural Cassava Farmers in Nigeria: A Pilot Study*" also found that cassava farmers' awareness, access and use of cassava farming inputs were poor despite the accessibility of thirteen information communication sources and

channels available in the villages studied. Yahaya, Adamson & Kareem (2018) in their study on "*Coverage of Agricultural Programmes in Broadcast Stations in Oyo State*" revealed that there was no significant difference between radio and television stations coverage of agricultural programmes, implying that the coverage of agricultural programmes in the broadcast stations was generally low.

Ridwan, Suleiman & Fatonji (2014) investigated the radio as a tool of diffusing agricultural innovations among peasant fish farmers in Lagos and found that peasant fish farmers were not aware of agricultural innovations on radio but however acknowledged receiving commercials on agricultural products and technologies through radio even as in most cases, the commercials were not useful because the technologies advertised are often unaffordable. The study also indicated that agricultural innovations are not available in radio programmes and the few programmes on agriculture are not useful because they do not address their problems. Zossou, Vodouhe, Van Mele & Lebailly (2012), in their study focusing on the level of farmers' access to rural radio in relation to gender and livelihood assets in the North and South of Benin revealed that rice processors who often listened to agricultural broadcasts had better social, financial and human capital stocks compared to those who didn't listen to agricultural broadcasts, meaning that radio influences the production of agriculture.

Unfortunately, broadcasting systems in the Sub Sahara region, according to the study conducted by Ihechu (2019) are beset by numerous problems including government interference, poor and lack of funding, unfavourable ownership structures and poor infrastructure making them unable to reach their intended audiences in rural areas. Although there are many development projects and programmes funded by governments and international aid agencies, these are not very effective because of, among other things, the poor performance of the broadcasting systems (Ihechu (2019). Fombad and Veli Jiyane (2019) investigated the role of community radio in information dissemination to rural women in South Africa and revealed that although community radio stations are recognised as support systems for information dissemination in rural communities, their role in information dissemination and the community development of women has not been fully explored. Wulystan (2018) studied the use of both radio and television as agricultural knowledge sources among farmers in Morogoro region of Tanzania and found that radio and television were among the seven sources of agricultural knowledge among farmers and that accessibility of radio and television sets, gender based division of labour, language, number of agricultural programmes broadcasted and awareness of the broadcasting time of agricultural programmes were among the factors influencing their usage of radio and television as sources of agricultural knowledge.

According to African Rural Radio Programme Analysis (ARRPA) Final Report by Farm Radio International (2016), when asked what they did best to serve farmers, majority of the radio stations said they provided farmers with agricultural information which was consistent with farmers' preferences. When asked why they listened to farmer radio programmes, the majority of farmers said they wanted information and knowledge from experts and other farmers. However, stations identified a significant number of key challenges to creating more effective farmer programming. These included: the need for broadcaster training; inadequate equipment; financial constraints which block innovative programming; a lack of professional skill development to help retain staff; stations devoting a large portion of their income to facility rental; and challenges with transportation to the field (Farm Radio International, 2016). Familusi

and Owoeye (2014), in an assessment of the use of radio and other means of information dissemination by the residents of Ado- Ekiti, Ekiti-State, Nigeria revealed that radio is the most important instrument in information dissemination because it reaches larger percentage of the people irrespective of their location; it promotes the level of awareness of the people on socio-political and economic issues and it also enable people to be adequately informed about programmes and activities of the government. However, finding identified three major problems facing the residents of Ado-Ekiti in accessing information which were poor television signals, high cost of purchase, installation and subscription of satellite television and many cannot afford the cost of internet connectivity. Nazari and Hasbullah (2010) found how educational intervention through radio resulted in significant knowledge enhancement and concluded that radio plays an effective in improving awareness of farmers.

Similarly, Maputseni (2006) found that radio remains a popular medium with communities and development actors that still see it to be useful in dissemination of development messages. Folitse, Osei, Dzandu & Obeng-Koranteng (2016), in their study on the impact of agricultural radio programmes on livelihoods of farmers with case of Royal FM in Brong-Ahafo Region of Ghana revealed that farmers had gained knowledge in various improved practices as a result of the Royal FM agricultural programme. Increase in knowledge has resulted in increased agricultural output and productivity leading to higher sustainable incomes. Majority of the farmers indicated that they were satisfied with the programme as it had improved the use of agricultural technologies in the area. It was also found out that the programme had impacted positively on the livelihoods of the farmers in the study areas. The impact of Royal FM agricultural programme was very high in Banda District and Wenchi Municipal (Folitse, Osei, Dzandu & Obeng-Koranteng, 2016). Adio, Abu, Yusuf & Nansoh (2016), in the use of agricultural information sources and services by farmers for improved productivity in Kwara State revealed that the information sources and services mostly used by the farmers included relations, fellow farmers, town criers, television, mobile phones, film shows, radio, etc. The need for information made the farmers to use it for crop and animal production; pests, diseases and weed control; fishing; disaster control and mitigation, fertilizer procurement and application; post-harvest technology; sourcing for labour; agricultural credit; etc. Johnson and Rajadurai (2020) found in a recent study that community radio programmes are advantageous to farmers in increasing the productivity and crop yield. Another recent study "*Formats of Radio Stations Agricultural Information Dissemination among Cassava Farmers in Nigeria*" conducted by Ojomo and Odigie (2020) revealed that radio stations used News, Discussion, Interview and Jingle formats to disseminate agricultural information to cassava farmers in Southwest, Nigeria. The study also revealed that many cassava farmers' agricultural information needs were on loan facility, availability of agricultural equipment, availability of seedlings, and climate and planting condition. The study recommended that, radio stations should add formats such as lecture or straight talk, spot announcements, testimonial and entertainment to the formats already being used to disseminate agricultural information to cassava farmers. Arowolo, Abiona, Awotunde & Olaoye (2013) conducted a study on "*Socio-Economic Factors Influencing Agricultural Radio Programme FILIN MAINOMA in Kainji Area of Niger State, Nigeria*" and found that majority (99.20%) of the respondents was aware of and listened to the radio programme *FILIN MAINOMA.* The study concluded that *FILIN MAINOMA* had impact on fisherfolks cash per unit effort.

Faruk, Okaiyeto & Musa (2018) in their study on "*the Radio Programme Agric Panorama and its implications for agricultural practices in Samaru, Zaria, Nigeria*" revealed that the target farmers access the programme through ABU FM 101.1 Radio and agreed that it has aided their farming practices. A majority of the farmers (86.9%) believed that the programme has contributed towards improving their farming practices; through delivery of useful information on agricultural management, improved fertilization, disease control, seeds and up to date information on best practices. Regression analysis shows that exposure to Agric Panorama programme is significantly and positively correlated with improvement of agricultural practices. Poor power supply, insufficient time, and language barrier were found to the major challenges faced by listeners in accessing the programme. Onkargouda (2013) studied the "*Credibility of Radio Programmes in the Dissemination of Agricultural Information: A Case Study of Air Dharwad, Karnataka*" and found that the farm radio programmes are the second credible, next to agriculture extension workers. Nabusoba (2014) studied the impact of Radio Agricultural programmes on Small Scale Farmers: The Case of "*Mali Shambani*" Programme on KBC Radio Taifa and found that agricultural knowledge is essential for increased productivity and that radio is the preferred medium for small scale farmers and extension experts in sharing information on agriculture innovations. The study further revealed that radio agriculture programmes alone cannot bring about change in the farming communities, there is need to integrate participatory models to serve rural farming communities effectively.

Sheila and Hezron (2017), in their study on "*Radio for farming? An analysis of regional Radio programs and Agricultural Productivity in Kenya*" found that due to access to information from media outlets like West FM radio station; farmers have managed to improve their yields over time. It has influenced farming activities and that through implementation of the new ideas farmers in the region have been economically empowered. Mwangi (2014) found in the study that the *Mugambo Wa Murimi* agricultural programme had influenced most of the farmers to become better at their farming practice (96.6%) while 76.7% had been able to practice a new farming method learnt from the programme. In addition, the findings indicated that 91.4% of the farmers found the programme useful and 81% of the farmers had been able to use information received through the programme to improve their farming practices.

From the literature reviewed, it shows that there is a gap in the previous literature on the surveillance responsibility of the radio in the distribution of palliatives to smallholder farmers in Nigeria and this study shall bridge that gap.

Theoretical Framework

This study is anchored on two theories; the Social Responsibility Media Theory and Agenda Setting Theory respectively. Social Responsibility Media Theory is most relevant to this study due its tenets which required the media such as the radio to (i) accept and fulfill certain obligations to society (such as surveillance over Covid-19 palliatives distribution to farmers); (ii) Through professional standards of informativeness, truth, accuracy, objectivity and balance, these obligations can be met; (iii) regulate itself within the framework of law and established institutions to be able to carry out its responsibility; (iv) Whatever might lead to crime, violence, civil disorder or offence to minority groups, should be avoided by the media; (v) reflect its society's plurality, giving access to various points of view and granting all the rights to reply; (vi) Based on the principle in (i), the society has the right to expect high standards of performance from the media. Intervention can only be justified to secure public good; and (vii)

Accountability of media professionals should be to the society, employers and the market (McQuail, 1987 in Anaeto, Onabajo and Osifeso, 2008). Propounded by F. S. Siebert, T. B. Peterson and W. Schramm (1963) the Social Responsibility Media Theory demands that freedom carries concomitant obligations, and the press, enjoys a privileged position under the government, is obliged to be responsible to society for carrying certain essential functions of mass communication. In general, socially acceptable press behaviour was to be anchored on self-regulation, but if the press would not voluntarily give them, then there must be certain social structures to ensure that it behaves in compliance with recognized social standards (Anaeto, Onabajo and Osifeso, 2008).

The Agenda Setting Theory on the other hand is relevant to this study because shows how issues which are regarded important are given attention in the mass media which enables the public perceive them as such. Anaeto, Onabajo and Osifeso (2008, p. 89) affirms that:

> The agenda-setting theory proposes that the facts which people know about public issues tend to be those which the mass media presents to them. Also, the significance which they ascribe to the same issues tends to be proportionate to the amount of attention given to the same issues in the media.

It is assumed that the media sets the agenda for our general discussion. The media may not always determine what we think, but what we think about. Although we have a right to think what we want to think, but surprisingly, we tend to think most of those things the media highlights as important (Anaeto, Onabajo and Osifeso, 2008). This study will be guided by the tenets of this theory to see the amount of attention the radio has given in monitoring the distribution of Covid-19 palliatives to smallholder farmers and the extent to which the amount of attention given has influenced farmers in having knowledge of how to access such palliatives in Nigeria.

Research Methodology

Descriptive survey research design was adopted and the questionnaire was used as the research instrument for data collection in this study. Survey research was used because its ability to enable large amount of the data to be collected. The population of the study comprised farmers who listen to the radio from six states of the federation thus: Gombe (North East), Kaduna (North West), Plateau (North Central), Rivers (South-South), Lagos (South West), and Enugu (South East). According to the National Bureau of Statistics (2016), the total number of farmers who have access to the radio across these states was as follows: Gombe: 405005; Kaduna: 1144276; Plateau: 693065; Rivers: 1405916; Lagos: 2519514; and Enugu: 859109. The population of the study therefore was 7026885 farmers in Nigeria. The sample size of the study was six hundred and one (600) which was determined using an online based sample size determination software-Calculator.net under the confidence level of 95%, margin error of 4%, population proportion of 50% and population size of 7026885 (https://www.calculator.net/sample-size). Stratified sampling technique was used to group the country into six geopolitical zones, including North East, North West, North Central, South West, South-South and South East respectively based on the already existing stratifications which gave room for fair representation. After that purposive sampling technique was used to sample Gombe from the North East; Kaduna from the North West; Plateau from the North Central; Lagos from South West; Rivers from South-South; and Enugu from the South East

based on individual peculiarity in their zones in terms of having the highest Covid-19 confirmed cases in the zones which smallholder farmers were severely affected. Respondents were selected proportionate to the population size of each state using the following formula:

$$\frac{S \times n}{N}$$

Where;

S = Size of State

n = Sample Size

N = Total Population

Gombe $\frac{405005}{7026885}$ X $\frac{601}{1}$ = 35

Kaduna $\frac{1144276}{7026885}$ X $\frac{601}{1}$ = 98

Plateau $\frac{693065}{7026885}$ X $\frac{601}{1}$ = 59

Lagos $\frac{2519514}{7026885}$ X $\frac{601}{1}$ = 215

Rivers $\frac{1405916}{7026885}$ X $\frac{601}{1}$ = 120

Enugu $\frac{859109}{7026885}$ X $\frac{601}{1}$ = 73

Based on the proportionate sampling technique used, 139 out of the 349 respondents sampled were from Lagos; 119 from Abuja; and 91 of them from Kaduna respectively. The research instrument used in the study was the questionnaire. The instrument (questionnaire) was designed and administered on 600 respondents who were smallholder farmers that have access to the radio.

Data in this study were collected through primary and secondary sources. Under primary source questionnaire was used for data collection, while journal articles, books, official documents, Internet materials were used as sources of the data under secondary sources of the data collection. The data collected were analysed using descriptive method. Multivariate Frequency Distribution Tables and *SPSS* were used as statistical tools for data analysis under descriptive method.

The below table shows the number of respondents proportionately sampled in the study:

Table 1: Respondents Proportionately Sampled in the Study

S/N	States Sampled	Population Size according to State	Sample Size according to State

1	Gombe	405005	35
2	Kaduna	1144276	98
3	Plateau	693065	59
4	Lagos	2519514	215
5	Rivers	1405916	120
6	Enugu	859109	73
	Total	**7026885**	**600**

Source: ***Field Survey, 2020*****.**

Table one shows that out of the 405005 population size of the study in Gombe State, 35 respondents were sampled; in Kaduna State, 98 respondents were sampled out of the 1144276 population size; in Plateau State, 59 respondents were sampled out of the 693065 population size; in Lagos, 215 respondents were sampled out of the 2519514 population size; in Rivers, 120 respondents were sampled out of the population size of 1405916; while in Enugu State, 73 respondents were proportionately sampled out of the population size of 859109 respectively; implying that the overall sample size of the study was 600.

Data Analysis/Discussion

This section of is aimed at the analysis of the data collected during the field survey study. The analysis is based on 578 representing (96.3%) copies the questionnaire that were administered on the respondents and returned successfully, while the 22 copies representing (3.7%) out of the 600 copies of the questionnaire that were administered is not included in the analysis. The breakdown of the questionnaire usable for analysis according to states sampled include: Gombe: 33 (93.3%); Kaduna: 95 (96.9%); Plateau: 57 (96.6%); Lagos: 207 (96.3%); Rivers: 116 (96.7%); 70 (95.9%).

Table 2: COVID-19 Palliatives Radio Monitors the Distribution to Smallholder Farmers in Nigeria

Variables	No. of Respondents												Total	
	Gombe		Kaduna		Plateau		Lagos		Rivers		Enugu			%
Distribution of Improved Seeds	7	21.2	23	24.2	13	22.8	39	18.8	25	21.6	16	22.9	123	21.3
Distribution of fertilizer	19	57.6	50	52.6	32	56.1	137	66.2	69	59.5	40	57.1	347	60.0
Distribution of finance	1	3.0	4	4.2	2	3.5	7	3.4	5	4.3	4	5.7	23	4.0
Provision of soft loans	3	9.1	9	9.5	5	8.8	9	4.3	7	6.0	5	7.1	38	6.6
Provision of agriculture mechanization services	2	6.1	5	5.3	3	5.3	8	3.9	6	5.2	3	4.3	27	4.7
Provision of agric technology	1	3.0	4	4.2	2	3.5	7	3.4	4	3.4	2	2.9	20	3.5
Total	**33**	**100**	**95**	**100**	**57**	**100**	**207**	**100**	**116**	**100**	**70**	**100**	578	**100**

Source: *Field Survey, 2020.*

Table 2 has revealed that 21.3% out of the were of the opinion that the radio was involved in monitoring distribution of the improved Seeds to them; 60.0% of the respondents said radio was involved in monitoring distribution of the fertilizer as palliatives to them; 4.0% out of the respondents were of the opinion that radio was involved in monitoring the distribution of finance to them; 6.6% out of the respondents believed that radio was involved in monitoring the provision of soft loans to them; 4.7% out of the respondents said radio was involved in monitoring the provision of agriculture mechanization services for them; while 3.5% among the respondents sampled said radio was involved in monitoring provision of agric technology for them.

It implies therefore that radio is on the surveillance in the distribution of COVID-19 palliatives to smallholder farmers in Nigeria with monitoring of the provision and distribution of fertilizer attracting its attention much higher than the rest of other aspects of the Covid-19 palliatives. This finding correlates with a number of the empirical studies reviewed in this study which show the different roles that the radio played in agricultural development (Abdul-Aziz, Salau & Baba, 2013; Adamides and Stylianou, 2018; Adio, Abu, Yusuf & Nansoh, 2016; Akosa, 2012; Ango, Yakubu & Usman, 2013; Anjolaoluwa and Oyelami, 2019; Bachmann and Kiteme, 2015; Familusi and Owoeye, 2014; Farm Radio International, 2016; Folitse, Osei, Dzandu & Obeng-Koranteng, 2016; Fombad and Veli Jiyane, 2019; Ihechu, 2019; Iman, 2020; Johnson and Rajadurai, 2020; Ladigbolu and Olajide, 2018; Maputseni, 2006; Myers, 2008; Nazari and Hasbullah, 2010; Odiaka, 2011; Oguche, 2016; Ogunsola, Ogunsola, Alarape, Oloba & Osalusi, 2019; Oyeyinka, Bello & Ayinde, 2014; Ridwan, Suleiman & Fatonji, 2014; Uzuegbu & Naga, 2016; Wulystan, 2018; Yahaya, Adamson & Kareem, 2018; Zossou, Vodouhe, Van Mele &

Lebailly, 2012). The finding also aligns with the tenet of the social responsibility media theory which charged the media to "accept and fulfill certain obligations to society" (McQuail, 1987 in Anaeto, Onabajo and Osifeso, 2008) such as surveillance over Covid-19 palliatives distribution to farmers; and the agenda setting theory which places a demand on the media such as the radio to give priority to any issue the society considered as being important (Anaeto, Onabajo and Osifeso, 2008).

Table 3: Ways Radio monitors Distribution of the COVID-19 Palliatives for Smallholder Farmers in Nigeria

Variables	No. of Respondents												Total	
	Gombe		Kaduna		Plateau		Lagos		Rivers		Enugu			
Breaking News	18	54.5	67	70.5	37	64.9	154	74.4	79	68.1	44	62.9	399	69.0
News investigation	4	12.1	7	7.4	5	8.8	15	7.2	9	7.8	6	8.6	46	8.0
News analysis	2	6.1	4	4.2	3	5.3	7	3.4	6	5.2	4	5.7	26	4.5
Documentary	1	3.0	3	3.2	2	3.5	6	2.9	4	3.4	3	4.3	19	3.3
Entertainment education	3	9.1	5	5.3	4	7.0	8	3.9	7	6.0	5	7.1	32	5.5
Combination of all of the above	5	15.2	9	9.5	6	10.5	17	8.2	11	9.5	8	11.4	56	9.7
Total	**33**	**100**	**95**	**100**	**57**	**100**	**207**	**100**	**116**	**100**	**70**	**100**	578	**100**

Source: *Field Survey, 2020.*

Table 3 revealed that 69.0% of the surveillance responsibility of the radio in distribution of the COVID-19 to farmers in Nigeria was through breaking News; 8.0% out of 100% was through news investigation; 4.5% out of 100% was through news analysis; 3.3% out 100% was through documentary; 5.5% out of 100% was through entertainment education; and 9.7% out of 100% was through combination of both.

This means that the surveillance responsibility of the radio in distribution of the Covid-19 palliatives in Nigeria is largely through breaking news while combination of breaking news, news investigation, news analysis, documentary and entertainment education to collectively monitor the Covid-19 palliatives distribution is observed to be less prioritize in the surveillance responsibility of the radio in doing so. This finding relates to the finding from the study conducted by Ojomo and Odigie (2020) which revealed that radio stations used news, discussion, interview and jingle formats to disseminate agricultural information to cassava farmers in Southwest, Nigeria. However, the finding from the study by Ojomo and Odigie (2020) fails to identify the radio programme format used more frequently for the dissemination of agricultural information.

Table 4: To what extent does the Radio involved in monitoring the Distribution of such palliatives for farmers' accessibility in Nigeria?

Variables	No. of Respondents												Total	
	Gombe		Kaduna		Plateau		Lagos		Rivers		Enugu			
To a great extent	6	18.2	11	11.6	9	15.8	17	8.2	13	11.2	7	10.0	63	10.9
To a little extent	26	78.8	81	85.3	45	78.9	183	88.4	99	85.3	61	87.1	495	85.6
Difficult to say	1	3.0	3	3.2	3	5.3	7	3.4	4	3.4	2	2.9	20	3.5
Total	**33**	**100**	**95**	**100**	**57**	**100**	**207**	**100**	**116**	**100**	**70**	**100**	578	**100**

Source: *Field Survey, 2020.*

Table 4 revealed that radio's involvement in monitoring distribution of the Covid-19 palliatives to smallholder farmers in Nigeria was 10.9% to a great extent; 85.6% to a little extent; and difficult to say was 3.5%. This implies that 86% out of the respondents sampled are dissatisfy with the extent to which radio is involved in monitoring distribution of the Covid-19 palliatives to them in Nigeria. This finding agrees with the finding from a study conducted by Yahaya, Adamson & Kareem (2018) which revealed that there was no significant difference between radio and television stations coverage of agricultural programmes, implying that the coverage of agricultural programmes in the broadcast stations was generally low.

Table 5: What influence does the surveillance role played by the radio have on farmers' knowledge of how to access the COVID-19 palliatives in Nigeria?

Variables	No. of Respondents												Total	
	Gombe		Kaduna		Plateau		Lagos		Rivers		Enugu			%
Have significant knowledge of how to access the COVID-19 palliatives	7	21.2	15	15.8	9	15.8	23	11.1	17	14.7	8	11.4	79	13.7
Have little knowledge of how to access the COVID-19 palliatives	24	72.7	76	80.0	45	78.9	177	85.5	94	81.0	59	84.3	475	82.2
Difficult to say	2	6.1	4	4.2	3	5.3	7	3.4	5	4.3	3	4.3	24	4.2
Total	**33**	**100**	**95**	**100**	**57**	**100**	**207**	**100**	**116**	**100**	**70**	**100**	**578**	**100**

Source: *Field Survey, 2020.*

Table 5 revealed that 13.7% have significant knowledge of how to access the COVID-19 palliatives based on the role the radio played; 82.2% have little knowledge of how to access the COVID-19 palliatives based on the surveillance role of the radio; while 4.2% found it difficult to say. It can be said here that smallholder farmers were not satisfied with the surveillance role that the radio played in the distribution of Covid-19 palliatives. This finding agrees with the finding of a study conducted by Ridwan, Suleiman & Fatonji (2014) which revealed that the peasant fish

farmers were not aware of agricultural innovations on radio but however acknowledged receiving commercials on agricultural products and technologies through radio even as in most cases, the commercials were not useful because the technologies advertised are often unaffordable. The study also indicated that agricultural innovations are not available in radio programmes and the few programmes on agriculture are not useful because they do not address their problems.

Conclusion

In the distribution of palliatives to smallholder farmers in Nigeria, monitoring the distribution to smallholder farmers was the major surveillance role played by the radio while other surveillance roles of the radio on palliative distribution for smallholder farmers included monitoring distribution of the improved Seeds; finance, soft loans to farmers; monitoring the provision of agriculture mechanization services for farmers; and monitoring the provision of agric technology services. The surveillance responsibility of the radio in the distribution of the Covid-19 palliatives in Nigeria is predominantly through breaking news while combination of breaking news, news investigation, news analysis, documentary and entertainment education to collectively monitor the Covid-19 palliatives distribution is observed to be less prioritized in the surveillance responsibility of the radio. Majority of the smallholder farmers (86%) were dissatisfied with the extent to which radio is involved in monitoring the distribution of the Covid-19 palliatives to them in Nigeria. As a result, only mall proportion of them (13.7%) has significant knowledge of how to access the COVID-19 palliatives in the country.

Furthermore, radio still remains a medium for the dissemination of agricultural information but its impact in monitoring distribution of the Covid-19 palliatives is yet to be significantly felt by smallholder farmers in Nigeria.

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