

**PERCEIVED EFFECTS OF COVID-19 PANDEMIC ON SMALL SCALE FARMING
ACTIVITIES AMONG HOUSEHOLDS IN KWARA STATE, NIGERIA**

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ABSTRACT

The study assessed the effects of covid-19 on small scale farming activities among households in Kwara State. Specifically, the study described socioeconomic characteristics of farmers, ascertained their level of knowledge about covid-19 and examined attitude of farmers towards use of preventive practices on covid-19. A two-stage sampling procedure was used to select 120 respondents and data was generated with the aid of structured interview schedule. Descriptive statistics was used to analyze the objectives while Pearson Product Moment Correlation (PPMC) was used to test the hypotheses. Results show that 88.3% of the respondents were male, mean age was 45years, average household size of 8 persons and average farming experience of 12.5years. Most of the respondents heard about covid-19 (99.2%) and farmers practiced safety preventive measures against covid-19 (66.6%). Major challenges farmers experienced during covid-19 include inability to go to the farm (75.0%), reduced/low yield as a result of not planting at the right time (88.8%), increased cost of farm inputs (93.3%) and decrease in income from lower crop yield (91.7%). There was a positive significant correlation between level of knowledge and farmers' perception of covid-19 effects on small scale farming activities ($p=0.000$, $r=0.370$). There was also significant relationship between attitude to use of preventive practices and their perception of the effects of covid-19 on small scale farming activities ($p=0.001$, $r=0.082$). The study therefore concluded that farmers' knowledge on covid-19 and attitude to use of preventive measures are paramount to how they perceive the effects of the pandemic. It was therefore suggested that timely and adequate information on the incidence, spread and prevention of diseases should be made available to people to enhance a positive response towards curbing the pandemic.

Keywords: COVID-19, Pandemic, Small scale farmers.

1. INTRODUCTION

COVID-19 is a virus that was first reported in Wuhan, China, but now spread worldwide. It is more infectious than the Coronavirus that causes Severe Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS) Khader et al (2020). Evidence indicates that the virus is carried by birds and mammals, with humans being particularly vulnerable to infection and transmission. COVID-19 is transferred largely by droplets from infected people coughing, sneezing, speaking, or by touching a contaminated surface and then contacting the eyes, nose, or mouth with contaminated hands. (Elayeh et al, 2020, Berhanu et al, 2021). It was declared as pandemic on 11march, 2020 by the world health organization (WHO, 2020).

The new virus sparked widespread alarm around the world because of its great potential for quick spread and the fact that it can be deadly (Yousaf et al, 2020). Covid-19 is a communicable

respiratory disease caused by a new strain of coronavirus that causes illness in man. Corona virus disease (covid-19) is an infectious disease caused by severe acute respiratory syndrome coronavirus-2(SARS-COV-2). COVID-19 in its later stage resulted in respiratory distress syndrome, septic shock, hemorrhage, and coagulation malfunction.

Small scale farmers are among the vulnerable populations though they remain the backbone of society in low- and middle-income countries, including Nigeria. They are important for the establishment of good crop with a fair yield (International Labour Organization, 2020), which can only be possible with adequate understanding of the challenges and needs they face. The COVID-19 pandemic has had a profound impact on humanity's lifestyle and activities, including agriculture (Agropecuarias et al, 2020). According to the Food and Agriculture Organization, COVID-19 has a substantial impact on agriculture in two areas: food supply and demand. Food demand and hence food security are significantly impacted as a result of mobility restrictions, reduced purchasing power, and a disproportionate impact on the most vulnerable population groups (Berhanu et al, 2021).

Effective infection prevention and control practices must be implemented at the global, national, and individual levels to combat the COVID-19 pandemic, which necessitates sufficient knowledge of the etiology, transmission, and various community responses to the pandemic (Azlan et al, 2020). Proper control and management of the pandemic disease can only be achieved in Nigeria when people are well informed and have adequate knowledge of the disease, as well as a positive mindset, to correctly implement the prevention practices. This will also stimulate knowledge about the perceived effects of the epidemic especially communities where it has not actually occurred for people to see. This means that community awareness, thinking, and prevention activities helps in containing the outbreak and minimizing its impact on public health, social, economic, and political issues (Ferdous et al, 2020). It is important that necessary intervention programme and awareness about covid-19 be put in place to reduce case of outbreak and spread of the disease to non-endemic areas.

The study therefore seeks to answer the following questions;

- What is the respondents' level of knowledge on covid-19 in the study area?
- What are respondents attitude to preventive practices on covid-19 in the study area?
- What is the perception of respondents on the effect of covid-19 on their farming activities?

Objectives of the study:

The main objective of this study is to determine the extent to which the rural households of the study area perceived the effect of covid-19 scourge on their small scale farming activities. Specific objectives include, to;

- assess respondents' level of knowledge on covid-19 in the study area
- ascertain respondents' attitude to use of preventive practices on covid-19 in the study area
- determine respondents perception about the effect of covid-19 on their farming activities

Hypotheses of the study:

- There is no significant relationship between respondents' level of knowledge on covid-19 and their perception of the effects of covid-19 on small scale farming activities.
- There is no significant relationship between respondents' attitude to use of preventive practices and their perception of the effects of covid-19 on small scale farming activities.

2. METHODOLOGY

Study area: The study was conducted in Kwara State, Nigeria. Kwara State, is a state in North Central Nigeria, bordered to the east by Kogi State, to the north by Niger state, and to the south by Ekiti, Osun, and Oyo states, while its western border makes up part of the international border with Benin Republic. The state is located on Latitude 8.9669⁰N and Longitude 4.3874⁰E

Population of Study: The population of this study comprised of all small scale farmers in Kwara state.

Sampling Procedure and Sample Size: A randomized selection was used to select 120 small scale farmers from three local governments in Kwara State. One local government area was randomly selected from each of the three senatorial districts. These include; Moro, Ilorin East and Ifelodun from Kwara North, Kwara Central and Kwara South respectively. Two rural communities were selected from each of the local government areas and respondents were selected from each community through house listing.

Table 1: Sampled respondents

Local Government	Community	Sampled respondents
Ilorin East	Elekoyangan	15
	Oke Oyi	22
Moro	Shao	35
	Asomu	20
Ifelodun	Ajase	20
	Omupo	8
Total		120

Method of Data Collection and Analysis:

A structured interview schedule was used to collect data from the respondents. Descriptive statistics (weighted mean, frequency, percentages) were used to analyze the objectives while Pearson Product Moment Correlation (PPMC) was used to test the stated hypotheses.

3. RESULTS AND DISCUSSION

Table 2. Respondents' level of knowledge about COVID-19

Knowledge of covid-19	Yes it is true	I am not sure	I do not know	No, it is not true
Covid-19 is a virus disease	91 (75.8)	1 (0.8)	25 (20.8)	3 (2.5)
It can be transmitted by insect bite	16 (13.3)	17 (14.2)	47 (39.2)	40 (33.3)
It spread fast in crowded places	111 (92.5)	4 (3.3)	4 (3.3)	1 (0.8)
It can be contacted in a dirty environment	76 (63.3)	13 (10.8)	15 (12.5)	16 (13.3)
We can prevent spread of COVID-19 by washing our hands	108 (90.0)	1 (0.8)	5 (4.2)	6 (5.0)

regularly				
Wearing of nose/face mask can prevent spread of COVID-19	114 (95.0)	1 (0.8)	1 (0.8)	4 (3.3)
Self isolation is a means of preventing spread of COVID-19	76 (63.3)	11 (9.2)	20 (16.7)	13 (10.8)
One symptom of COVID-19 is coughing	114 (95.0)	1 (0.8)	4 (3.3)	1 (0.8)
Someone infected with COVID-19 may not be able to breathe properly	108 (90.0)	3 (2.5)	7(5.8)	2 (1.7)
There is a vaccine for COVID-19	90 (75.0)	3 (2.5)	26 (21.7)	1 (0.8)

Result on the respondents' level of knowledge on covid-19 is as shown in Table 2 above. It could be observed that the small scale farmers have a good knowledge of covid-19. Seventy-five percent of them indicate that it is a virus disease, 92.5% said it spread fast in crowded places and 90.0% know that we can prevent spread of COVID-19 by washing our hands regularly. Majority of the respondents (95.0%) also know that wearing of nose/face mask can prevent spread of COVID-19 while more than half (63.3%) indicated self-isolation as a means of preventing spread of COVID-19. Majority of the respondents identified coughing (95.0%) and difficulty in breathing (90.0%) as symptoms of covid-19 infection. Also, 90.0% of the respondents know there is a vaccine for covid-19. This is line with the report of Chiumia et al (2023) that smallholder farmers in Malawi had a good knowledge on transmission, prevention, signs and symptoms of covid-19. In a similar study in Akwa-Ibom State Nigeria, Akwaowo et al (2021) found that majority of respondents showed a high knowledge level of infection, transmission and prevention of covid-19. This shows that there was widespread information sharing on the incidence of the pandemic among various groups of people that led to high degree knowledge among respondents. According to Reuben et al. (2020), having a good knowledge of covid-19 was important in gaining a clear understanding of the pandemic very crucial to ensure that individuals follow appropriate prevention practices.

Table 3. Attitudes towards covid-19 preventive measures

Preventive measures	Yes	No	Every time/as often as possible	Whenever I have the opportunity	Anytime I remember
Hand washing	114 (95.0)	6 (5.0)	59 (49.2)	30 (25.0)	25 (20.8)
Use of hand sanitizer	110 (91.7)	10 (8.3)	55 (24.2)	29 (24.2)	26 (21.7)
Use of face/nose mask	113 (94.2)	7 (5.8)	80 (66.7)	21 (17.5)	12 (10.0)
Social distancing	97 (80.8)	23 (19.2)	65 (54.2)	26 (21.7)	6 (5.0)
Personal hygiene	115 (95.8)	5 (4.2)	76 (63.3)	25 (20.85)	14 (11.7)
Sneezing into your elbow/use of tissue paper or handkerchief	88 (73.3)	32 (26.7)	49 (40.8)	25 (20.8)	14 (11.7)
Avoid touching dirty surfaces	113 (94.2)	7 (5.8)	67 (55.8)	27 (22.5)	19 (15.8)
Avoiding crowded places	108 (90.0)	12 (10.0)	78 (65.0)	21 (17.5)	9 (7.5)
Maintaining a well-ventilated environment	113 (94.2)	7 (5.8)	77 (64.2)	30 (25.0)	6 (5.0)

The result on attitude to use of preventive methods revealed that respondents have good/positive attitude to covid-19 preventive measures. Apart from hand washing (49.2%), use of tissue paper or handkerchief (40.8%) and use of hand sanitizer (24.2%) more than half of the respondents practice other preventive measures as often as possible. These practices include; use of face/nose mask (66.7%), social distancing (54.2%), personal hygiene (63.3%), avoiding crowded places (65.0%) and maintaining a well-ventilated environment (64.2%). This is similar to the findings of Akwaowo et al, (2021) who reported a satisfactory attitude to use of covid-19 preventive practices. The studies of Ejuh et al (2020) and Ilesanmi and Afolabi (2020) also revealed positive attitude among respondents towards covid-19 preventive practices. Less use of hand sanitizer could be as a result of high cost which may not be affordable to respondents.

Table 4. Effects of covid-19 on farming activities

Effects of covid-19 on farming activities	Very severe	Severe	Mildly severe	Not severe	Not a problem at all
Inability to go to the farm during the lockdown	40 (33.3)	50 (41.7)	1 (0.8)	-	29 (24.2)
Reduced/low yield as a result of not planting at the right time	52 (43.3)	54 (45.0)	3 (2.5)	4 (3.3)	7 (5.8)
Increased cost of farm inputs	37 (30.8)	75 (62.5)	3 (2.5)	4 (3.3)	1 (0.8)
High labour cost, due to excessive weed invasion	32 (26.7)	58 (48.3)	21 (17.5)	8 (6.7)	1 (0.8)
Decrease in income from lower crop yield	59 (49.2)	51 (42.5)	3 (2.5)	3 (2.5)	4 (3.3)
Loss of stored farm produce	37 (30.8)	48 (40.0)	7 (5.8)	-	28 (23.3)
Unable to market farm produce	68 (56.7)	38 (31.7)	4 (3.3)	1 (0.8)	9 (7.5)

Higher hospital bills	23 (19.2)	22 (18.3)	64 (53.3)	4 (3.3)	7 (5.8)
Unable to feed well due to lower income	36 (30.0)	35 (29.2)	15 (12.5)	4(3.3)	30 (25.0)

Effect of covid-19 on farming activities as perceived by respondents is presented in Table 4. The result revealed that; inability to go to the farm (75.0%), reduced/low yield as a result of not planting at the right time (88.3%), increased cost of farm inputs (93.3%), decrease in income from lower crop yield (91.7%) and unable to market farm produce (88.4%) were major challenges during the pandemic. This corroborates the findings of Chiumia et al. (2023) that farmers’ income was the highest source of livelihood affected due to their inability to work, do business since farmers had difficulties to trade or have access to markets.

Test of Hypotheses:

H₀₁: There is no significant relationship between respondents’ level of knowledge on covid-19 and their perception of the effects of covid-19 on small scale farming activities.

Table 5: Correlation between level of knowledge and respondents’ perception of the effects of covid-19 on small scale farming activities.

Perception	Effects of Covid-19 (EOC)	Level of Knowledge (LOK)
EOC Pearson Correlation	1	.370**
Sig. (2-tailed)		.000
N	120	120
LOK Pearson Correlation	.370**	1
Sig. (2-tailed)	.000	
N	120	120

**Correlation is significant at the 0.01 level (2-tailed).

The Pearson Product Moment Correlation (PPMC) above measures the relationship between level of knowledge (denoted by LOK) and effects of covid-19 on small scale farming activities (denoted by EOC). It can be seen from result above that there positive and significant correlation between level of knowledge and covid-19 effects on small scale farming activities (p=0.000, r= 0.370). Thus, there is significant relationship between level of knowledge and their perception of the effects of covid-19 on small scale farming activities. This implies that if farmers are more knowledgeable about covid-19, their perception of its effects on their farming activities will improve which can also improve their attitudes towards the preventive measures prescribed for the pandemic. This result is in line with the findings of Akwaowo et al. (2021) who also reported a significant relationship between respondents’ knowledge and perception of covid-19. Similar studies (Reuben et al., 2020, Ejeh et al., 2020 and Hager et al., 2019) also reported significant correlation between respondents’ knowledge and perception of covid-19.

H₀₂: There is no significant relationship between respondents’ attitude to use of preventive practices and their perception of the effects of covid-19 on small scale farming activities.

Table 6: Correlation between attitude to use of preventive practices and respondents' perception of the effects of covid-19 on small scale farming activities.

	Effect of Covid-19 (EOC)	Attitude to use of preventive measures (ATT)
EOC Pearson Correlation	1	.082
Sig. (2-tailed)		.001
N	120	120
ATT Pearson Correlation	.082	1
Sig. (2-tailed)	.001	
N	120	120

** . Correlation is significant at the 0.01 level (2-tailed).

The Pearson Product Moment Correlation (PPMC) above measures the relationship between attitude to use of preventive practices (denoted by ATT) and perception of the effects of covid-19 on small scale farming activities (denoted by EOC). It can be seen from result above that there is positive and significant correlation between attitude to use of preventive practices and covid-19 effects on small scale farming activities (p=0.001, r=0.082). Thus, there is significant relationship between attitude to use of preventive practices and their perception of the effects of covid-19 on small scale farming activities. This result is in consonance with the findings of Chiumia et al. (2023) and Akwaowo et al. (2021) who found significant relationship between attitude to preventive practices and respondents' perception of covid-19.

4. CONCLUSION AND RECOMMENDATIONS

The study concluded that farmers' had good knowledge of covid-19; they also practice the recommended preventive during the pandemic. Major challenges farmers experienced during covid-19 include inability to go to the farm, reduced/low yield as a result of not planting at the right time, increased cost of farm inputs and decrease in income from lower crop yield. It was therefore suggested that timely and adequate information on the incidence, spread and prevention of diseases should be made available to people to enhance a positive response towards curbing the pandemic.

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