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EFFECT OF ILL HEALTH AND COPING STRATEGIES ON RICE PRODUCING FARMERS IN YALA LOCAL GOVERNMENT AREA OF CROSS RIVER STATE, NIGERIA

***EGBEADUMAH, M.O.[1], ABALI, O.[2], EGBEADUMAH, E. I.[3] & AKEREDOLU D. T.[1]**

[1]Department of Agricultural Economics and Extension, Faculty of Agriculture and Life Sciences, Federal University Wukari, Taraba State, Nigeria.
[2]National Committee for Development of Technology/Ministry of Scientific Research and Innovation, Cameroon.
[3]Department of Public health, Faculty of Health and Social Care, University of Chester, United Kingdom

Abstract:

The study investigated the effect of ill health on rice farmers in Yala Local Government Area of Cross River State. Multi stage sampling techniques was used to obtain primary data from a cross section of 90 rice farmers in the study area through the use of questionnaire. The data was analyzed through the use of descriptive statistics and multiple regression. The study revealed that the various control interventions used by the respondents in the study area include health treatment (42.2%), traditional herbs (13.3%), labour employment (12.2%), hired labour (31.1%), access to health care service (1.1%). Farm size, level of education, household size, had positive significant influence on the productivity of rice farmers while age, days of incapacitation, ill health had negative significant influence on rice producing farmers. It was recommended that there should be improve access to affordable healthcare services, such as mobile clinics or community health workers, and provision of education campaigns on the symptoms and treatment of ill health.

Keywords:

Rice farmers, Ill health, coping strategy, production.

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INTRODUCTION

Background of the Study

Rice farming has played a pivotal role in Nigeria's agricultural history and continues to be a cornerstone of food security, both locally and globally. Rice *Oryzasativa* was first domesticated in the Yangtze River basin over 8,000 years ago, spreading through cultivation, migration, and trade to become a staple crop worldwide (Massawe*et al.,* 2016). In Africa, the domestication of *Oryzaglaberrima* roughly 3,000 years ago further contributed to the continent's rice farming tradition. Today, rice supports the diets and economies of millions, with over 40,000 cultivars adapted to diverse growing conditions (Amanullah*et al.,* 2017).

Nigeria is one of Africa's largest consumers of rice, with demand exceeding 7 million tonnes annually. Small-scale farmers account for the majority of production, underscoring the crop's importance to rural livelihoods (Siwar*et al.,* 2014). Despite government initiatives to boost production, challenges such as ill health among farmers hinder agricultural productivity. Ill health, a leading cause of morbidity in sub-Saharan Africa, disproportionately affects rural populations, reducing labor capacity and crop yields while perpetuating poverty (Cibulskis*et al.,* 2016; WHO, 2015).At the global level, Ill Health incidence is concentrated in the world's poorest countries, with 90% of Ill Health deaths occurring in sub-Saharan Africa (WHO. 2015). Ill health depresses economic growth and increases food insecurity in a nation however, the links between Ill Health and poverty at the micro or household level remainsa topic to be continually researched. Ill Health and agriculture are closely related and tend to have causal relationship, this is because the agricultural environment provides suitable condition for breeding of disease vector which cause ill health in famers/human beings.

The relationship between ill health and rice farming is particularly pronounced in Nigeria and particularly inYala Local Government Area of Cross River State. The waterlogged conditions of rice fields serve as breeding grounds for *Anopheles gambiae*, the primary vector of ill health, further compounding the disease's impact on agricultural productivity (Oluwatayo, 2014). Farmers afflicted by ill health often harvest only a fraction of their potential yield, amplifying financial insecurity and economic hardship (Assefa*et al.,* 2018).

This study assessed the effect of ill health on rice production and farmers' livelihoods in Yala Local Government Area,determined the effect of ill health on the productivity of rice farmers and it evaluated current ill health control interventions. By addressing these challenges, the study will contribute to improving the well-being of rice farming communities and strengthen

Nigeria's food security framework (WHO, 2020; Food and Agriculture Organization of the United Nations, 2020).

MATERIALS AND METHODS

Study area

Yala is a Local Government Area in Cross River State, Nigeria. Its headquarters is in the town of Okpoma in the east of the area at 6°35′35″N 8°38′01″E. It has an area of 1,739 km2 and a population of 210,843 at the 2006 census. This makes Yala the second most populated LGA in Cross River State, coming after Akpabuyo. The area is located viz: the rainy and dry-season. The annual precipitation ranges from 2000-3000mm per annum within the humid rainforest zone and has two distinct seasons. The local government also offers a wide range of investment opportunities in agro- based industries as well as solid mineral industries. The area is predominantly agrarian and is known for rice production in the entire South Southgeo-political zone of Nigeria. The choice of the study area was however, informed by this fact.

Sampling Procedures

Multistage sampling procedure was employed to select farmers in the study area. In the first stage six (6) wards in the Local Government was selected purposively because of the predominance of rice farmers in those areas. In the second stage, three (3) communities were selected from each ward to make a total of 18 communities for this study. Third stage of the sampling involve a simple random sampling of five (5) respondents from each community giving a total of ninety (90) rice farmers for the study.

Data Collection

Primary data was collected using a structured questionnaire administered to rice farmers. The questionnaire captured household characteristics (age, sex, occupation, marital status, and education), utilization of prevention measures (ownership and use of long-lasting insecticidal nets, indoor residual spraying, and environmental management), socioeconomic factors, and health-seeking behaviours. The data provided insights into the prevalence of ill health and its relationship to rice-growing practices.

Data Analytical Techniques

The analysis used descriptive statistics to examine control interventions, and multiple regression (OLS model) to assess the impact of ill health on rice farmers.

Model specification

$Y= \beta_0+\beta_1X_1+ \beta_2X_2 + \beta_3X_3+ \beta_4X_4+ \beta_5X_5+ \beta_6X_6+ \beta_7X_7+ \beta_8X_8+ \beta_9X_9+\mu.$

Where;

Y = Rice output (bag/kg)

X_1 = Farm size(ha)

X_2 = Age (years)

X_3 = Level of education (years)

X_4 =Household size (number of persons)

X_5 =Distance to health care service (km)

X_6 = Off farm income (Naira)

X_7 =Health condition (healthy=0, ill health 1)

X_8=Days of incapacitation (number of days)

X_9 = Ill health incidence (yes or no)

β_0- β_{12} are estimated parameters

μ = disturbance or error term.

RESULTS AND DISCUSSION

I: Prevalence of Ill health

A: Were you down with ill health in the last Farming Season?

Based on the results in Table 1, it appears that majority (81.1%) of respondents have had ill health in the past, while 18.9% were healthy. This suggests that ill health is a significant health issue in the study area and this will hinder increased productivity of rice. This is in line with Osuagwu*et al* (2021), which found that ill health is a leading cause of death and disease in many parts of Nigeria.

B: How many days were you incapacitated

The analysed result in Table 1 revealed that42.2% of respondents were incapacitated for 21-30 days due to ill health during a farming season. This is followed by 25.6% of respondents who were incapacitated for 11-20 days, 18.9% of the rice farmers were incapacitated for 1-10 days, and a minority 13.3% were not incapacitated at all throughout the farming season. This suggests that ill health can have a significant impact on the ability of people to increase productivity hence, the study area becomes highly food insecure with less energy for the respondents to carry out their daily activities. This is in line with Nworu*et al.*, (2020), which

found that people with ill health typically experience symptoms for several days. This highlights the need for improved access to treatment and preventive measures in the study area.

C: Treatment

The resultin Table 1 indicates that majority (84.4%) of respondents seek treatment for ill health, while 15.6% do not. This suggests that most people in the study area are aware of the importance of seeking treatment for ill health which will help increase productivity of rice. This is in line with Chukwu*et al.,* (2020), which found that low levels of awareness about ill health prevention and treatment are a major problem in Nigeria.

D: Medication

The result further showed that only 23.3% of respondents receive medications for ill health, while the majority 76.7% does not. This suggests that there is a gap in access to medications for ill health in the study area. This is in line with Ujumadu*et al*., (2021), which found that low access to medicines is a major challenge to improving ill health treatment in Nigeria.

Table 1: Prevalence of Ill Health

Were you sick in the last farming season?	**Frequency**	**Percent**	**Mean**
Yes	73	81.1	
No	17	18.9	
Total	90	100.0	
Days of Incapacitation			
None	12	13.3	
1-10	17	18.9	
11-20	23	25.6	16.4333
21-30	38	42.2	
Total	90	100.0	
Treatment			
1-19999	76	84.4	
20000-39999	13	14.4	
>39999	1	1.1	1.0922

Total	90	100.0
Receive medication during illness		
Yes	21	23.3%
No	69	76.7%
Total	90	100%

Source Field survey 2023

Effectof ill health on productivity

A healthy farmer will be more productive than an unhealthy/ill famer.The regressioncoefficient for the variables; farm size, age, Level of education, Household size and dist2 healthcare (X_1-X_5)respectively on Table 1 are significant at 1%. The fact that the variables are significant at 1% level means that there is 99% chance that the result is not due to the chance, and that the variables actually affect productivity. The positive sign on the coefficient means that the variable has an increasing effect on productivity, while the negative sign on the coefficient means that the variable has a decreasing effect on the productivity. Farm size (X_1) has |a positive coefficient which implies that as farm size increases, rice productivity increases. Age (X_2) has a negative coefficient; it implies that as age increases, rice productivity decreases. This follows apriori expectation that as a respondent grows older, the ability to work manually reduces hence, the reduced productivity. A positive coefficient for education (X_3) indicates that as the level of education increases, productivity also increases. This implies that that an educated famer will have access to extension workers and use improved variety of seeds for higher productivity: A positive coefficient for credit access (X_4) would suggest that when farmers have access to credit, their productivity increases. This is likely because farmers can use credit to purchase inputs such as fertilizer and equipment, which can lead to higher yield. For X_5 (health status), a positive coefficient would mean that better health leads to higher productivity. A negative coefficient for farm experience (X_8) would suggest that productivity decreases as experience increases. This could happen if older farmers are resistance to change or are unwilling to adopt new technologies. For X_9 (ill health incidence), a negative coefficient means that an

increase in ill health incidence is associated with a decrease in productivity. This may be because ill health makes it difficult for farmers to work leading to lower yields due to crop loss.

Table 1:Effect of ill health on productivity

Variables	**Coefficient.**	**Standard Error.**	**P>|t|**
Farm size	X_1 | .3082712	.0681091	4.53 0.000
Age	X_2 | -.1547621	.0563518	-2.75 0.007
Lev of edu.	X_3 | .6109778	.0471699	12.95 0.000
Hhold size	X_4 | .0993604	.0355244	2.80 0.006
Dist2 healthcare	X_5 | .0721416	.0269028	2.68 0.009
Off farm inc.	X_6 | -.4270253	.6275513	-0.68 0.498
Health condi.	X_7 | .1766103	.3327236	0.53 0.597
Days of incap.	X_8 | -.2188625	.1225862	-1.79 0. 078
Ill health.	X_9 | -.6752714	.3691612	-1.83 0.071
Cons	| 8.246632	3.173456	2.60 0.011

R-squared = 0.8980

Adj R squared = 0.8865

F (9, 80) = 78.23

Source: Field survey, 2023.

III: Ill health control intervention

Ill health distorts the productivity of a farmer and reduces food security in a nation hence it should be controlled and reduced to the barest minimum. The results from analysed data gave rise to the following: medicinal health treatment (42.2%) is the most common strategy adopted by respondents during ill health attacks this shows that seeking medical help by going to pharmacies is done by a good number of respondents, 13.3% of respondents seek traditional treatment. The result also revealedthat a portion of respondents (31.1%)rely on hired labour to be able to carryout farming activities and the help of friends and family members for support during ill health attacks (12.2%). 1.1% have access to health careservices, these findings could indicate a lack of access to formal healthcare and a reliance on informal support networks during times of illness.

Table 3: Ill health control intervention

Coping Strategies Adopted during Ill health Attack	Frequency	Percent
Medical Health Treatment	38	42.2
Traditional Herbs	12	13.3
Family Labour	11	12.2
Hired Labour	29	31.1
Access to Health Care	1	1.1
Total	**90**	**100.0**

Source: Field survey, 2023.

CONCLUSION AND RECOMMENDATION

Conclusion

The study revealed that ill health limits productivity and makes a nation food insecure. The many days of incapacitation affect the level of yield, good health is important for the respondents hence, treatment of each ill farmer should be importantly addressed. The regression result revealed that farm size, age, level of education, household size and dist2 healthcare were all significant affecting productivity of rice in various ways. Access to health care services is pertinent hence, the government should make health care services available to all and sundry in the study area

Recommendation

- Improve availability and affordability of formal healthcare services in farming communities to reduce reliance on informal support networks and traditional treatments.
- Promote the use of effective health interventions, such as insecticidal nets and indoor residual spraying, to lower ill health prevalence among farmers.

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