

UTILIZATION OF HEALTHCARE FACILITIES AMONG FARMING HOUSEHOLDS IN YEWA SOUTH LOCAL GOVERNMENT AREA, OGUN STATE, NIGERIA

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ABSTRACT

The study investigated the utilization of healthcare facilities among farming households in Yewa South Local Government Area of Ogun State. Multi-stage sampling technique was used to select 120 farming households and primary data were collected through the use of questionnaire. The data were analyzed using descriptive statistics and multivariate probit regression model. The results indicated that the mean age of the respondents was 41 years with an average household size of five people. About 31% of the respondents had no formal education and farming is the main occupation of respondents. Most (45.8%) of the respondents travelled a distance of 5 km or less before accessing health care facilities. Primary health care was the major health care service utilized by respondents in the study area. Results further revealed that age, education, household size, income, distance to healthcare facilities, severity of ailments and belief were the major socio-economic factors determining demand for healthcare facilities in the study area. The findings call for government at all tiers to establish more healthcare facilities closer to the residence of the rural areas to increase the farming households' accessibility to these facilities.

Key words: healthcare, households, multivariate probit, trade-medicals

INTRODUCTION

Sound health is a basic requirement for living a productive life. According to World Health Organization (2000), "health is a state of complete physical, social and mental well-being and not merely an absence of a disease or infirmity". Poor health affects agricultural production as the health status of the farmers affects their physical ability to work, efficient utilization of resources as well as ability to adopt innovations and thus impart negatively on the welfare of their entire household (Asenso-Okyere *et al.*, 2011). Cole (2006) found that the vast majority of the farmers suffered from various ill health such as muscular fatigue, malaria, rheumatic pains and skin disorder, forcing them to take days off farming. Poor health will result to a loss of days worked or in reduced efficiency, which may likely reduce output especially when family labour is inadequate as a coping strategy (Antle and Pingali, 1994). The link between agriculture and health is bi-directional (Asenso-Okyere *et al.*, 2011). According to Gallup and Sachs (1990) agriculture supports health by providing food and nutrition for the world's people by generating income that can be spent on healthcare, yet agricultural production and food consumption can also increase the risks of water related diseases

(malaria) and food-borne diseases- as well as health hazards linked with specific agricultural system and practices, such as infectious animal diseases (avian flu, brucellosis), pesticide poisoning and aflatoxicosis. The state of the Nigerian health system is non-adoptive and grossly insufficiently funded. Total expenditure on health was reported as 3.7% of GDP in 2014 (WHO, 2016). As a result, Nigeria still has one of the worst health indices in the world and sadly ranked fourth country with the worst maternal mortality rate ahead of Sierra Leone, Central African Republic and Chad (WHO, 2016). According to the World Bank estimates, Nigeria's Maternal Mortality Rate (MMR) is still as high as 814 per 100,000 live births in 2015 (CIA World Factbook, 2018). The national health management information system is weak and beyond the reach of the farmers. The use of healthcare facility in the rural areas of Nigeria is limited or restricted by inadequate healthcare facilities, insufficient staff, equipment or medical training; other limitations include far distance location of facility, method of payment, income, household size, years of formal education, main-occupation of households and more importantly limited access to healthcare services.

There is evidence that the consumers choose the facilities in which access is easier and the payment system is flexible (Nguyen *et al.*, 2008). Bir and Eggleston (2002) further reported that socio-economic and demographic conditions play important roles in choosing healthcare facilities. Salihu and Sanni (2013) found out in their study that majority of farmers used the home-based care of self-medication during ill health, that is, purchasing and taking drugs without being prescribed by a qualified medical practitioner. They opined that this may be informed by the affordability of the treatment type. This study would therefore examine the demand for healthcare services among farming households in Ogun State, Nigeria. Specifically, the study sought to (i) describe the socio-economic characteristics of the respondents in the study area; (ii) identify the choice of healthcare facilities available and utilized by the farming households in the study area; and (iii) determine the factors influencing the choice of healthcare facilities the study area.

MATERIALS AND METHODS

Study Area

The study was conducted in Yewa South Local Government Area of Ogun State, Nigeria. Its headquarters is in the town of Ilaro. The study area is located on Coordinates: 6°48'N 2°57'E. It shares boundaries with Yewa North and Ipokia Local Government Areas in the North and South, respectively and in the West and East by Ifo and Ado-Odo/Ota Local Government Areas. Yewa South Local Government is naturally endowed with large expanse of land area of 629 km² and a population of 168,850 at the 2006 census. The people of Yewa South Local Government Area are predominantly farmers while a few people engage in craftsmanship. The main crops grown in the area include cassava, yam, oil palm, maize, cocoa, pepper, vegetables and fruits and poultry like eggs, fowls, goats, sheep, among others.

Sample Size and Sampling Procedures

A multi-stage sampling technique was employed in the selection of respondents for this study. The first stage involved the purposive selection of the two major blocks (Ilaro and Ifekowajo) in the study area to have a wider coverage of the area. In the second stage, two wards (Ilaro 1, Ilaro II, Oke-Odan and Owode-Yewa) were randomly selected from each of the blocks. The third stage involved the use of simple random sampling technique to select a village from each of the wards making a total of four villages. The last stage involved the purposive selection of 30 farming households from each of the selected villages making a total of 120 respondents for the study. Primary data on socio-economic characteristics of farming households, choice of healthcare services, facilities available

and utilized by the farming households were obtained from household heads in the study area using an interview schedule using questionnaire.

Data Analysis Techniques

Descriptive analysis

Descriptive statistics such as frequencies, percentages, means, standard deviation and chart was adopted to describe the socio-economic characteristics of the respondents and their choice of healthcare services in the study area.

The multivariate probit regression model

This was used to determine the factors influencing the choice of healthcare facility in the study area. The model is specified as:

$$Y_{ij} = \beta_0 + \beta X_{ji} \dots\dots\dots (1),$$

where Y_{ij} is a binary dependent variable with value as 1 if the i^{th} farmer utilizes j^{th} health facility and 0 if otherwise. The j^{th} health facility is such that Y_1 is primary health centre (PHC), Y_2 is general hospital, Y_3 is private hospital, Y_4 is trade-medical, and Y_5 is self-care. β is the regression parameters or coefficient; e is the error term. The X_{ji} is a vector of explanatory variables and is expressed as:

- X_1 - sex of household head (dummy),
- X_2 - age (years),
- X_3 - educational status (1 for formal education and 0 for otherwise),
- X_4 is marital status (1, married; 0, otherwise),
- X_5 is household size (Number of persons),
- X_6 is income (₦),
- X_7 is distance to health facility (km),
- X_8 is severity of illness (1, severe; 0 otherwise),
- X_9 is belief (1, spiritual; 0, otherwise)
- X_{10} is healthcare needs (1, frequent; 0, otherwise);
- X_{11} is waiting time (minutes), and
- X_{12} is cost of treatment (₦).

RESULTS AND DISCUSSION

Socio-Economic Characteristics of Respondents

Results in Table 1 reveal that majority (55.0%) of the sampled household heads were males while 45% were female. This implies that the farming households in the study area were male dominated. This observation agrees with Aina *et al.* (2015) that men, being the heads of the rural households tend to have higher demand for healthcare services than women who are mostly submissive to the will of their husbands regarding health seeking. Majority (67.5%) of the respondents were below 50 years of age. The mean age of about 41 years implies that the respondents were young and within their economic and production age and are therefore conscious of the importance of good health to their farming enterprise. Only 30.8% of the respondents had no formal education. The modal education of

Table 1: Socio-economic characteristics of farming households in the study area $n = 120$

Variable	Frequency	Percentage
Sex		
Male	66	55.0
Female	54	45.0
Age (years)		
≤30	22	18.3
31-40	29	24.2
41-50	30	25.0
51- 60	24	20.0
Above 60	15	12.5
Mean	41 (± 14.490)	
Educational Qualification		
No Formal Education	37	30.8
Primary Education	31	25.8
Secondary Education	17	14.2
Adult/Voc. Education	20	16.7
Tertiary Education	15	12.5
Modal	Primary Education	
Marital Status		
Single	33	27.5
Married	83	69.2
Divorced	4	3.3
Household Size		
1-5	80	66.7
6-10	32	26.7
11-15	7	5.8
>15	1	0.8
Mean	5(± 2.761)	
Income (₦)		
≤50,000	57	47.5
51,000-100,000	40	33.3
>100,000	23	19.2
Mean	102,812.50 (± 256333.036)	
Belief on Cause of Illness		
Natural	112	93.3
Spiritual	8	6.7
Distance to Health Facility	7	5.8
≤5km	55	45.8
6-10km	45	37.5
>10km	20	16.7
Mean	3.08 (± 0.264)	
Waiting Time		
≤30mins	28	23.3
31-60mins	72	60.0
>60mins	20	16.7
Mean	27.84 (± 14.316)	

Source: Field survey data, 20

primary education implies that the respondents are literate. High literacy level will enable the farmers to understand and differentiate the various healthcare services available to them which could inform their choices of healthcare services in the study area. Majority (69.2%) of the respondents were married, 27.5% were single while 3.3% were divorced. Higher percentage of married respondents implies the probability of higher utilization of healthcare services in the study area. This is because married farmers would have to see to the healthcare needs of their spouses, children and other members of their households thereby incurring higher cost of treatments than the unmarried farmers.

The results further reveals that 66.7% of the respondents had between 1 and 5 people in their households while 6.6% had more than 10 people as their household size. The mean household size of 5 people indicates that the respondents had small household size which could have implications for healthcare demand in the study area. Oluwatayo (2015) submitted that as household size increases, income per capital declines which invariably lead to reduced wellbeing. Most (47.5%) of the respondents earned less than ₦50,000 monthly, 33.3% earned between ₦51,000 and ₦100,000 monthly while 19.2% earned more than ₦100,000 monthly. The mean monthly income of ₦102,812.5 implies that the respondents are doing well financially. This could afford the farming households the opportunity of choosing a better healthcare facility during health ills. Belief on cause of illness could inform the choice of healthcare demand. While 93.3% believed that the cause of their illness was natural, 6.7% believed their illness had spiritual undertone and as such should be treated using trado-medicals. A larger percentage (45.8%) of the respondents lived between 1 and 5km to their preferred healthcare facilities, 37.5% lived 6 to 10 km while 16.7% lived more than 10km to their preferred healthcare facilities. The mean distance of 3.08km implies that majority of the respondents lived close to their preferred healthcare facilities. The result agrees with Omonona *et al.* (2015) who reported that the choice of health facilities increases with proximity to the health facilities.

Choice of Healthcare Facilities Utilized by Farming Households in the Study Area

Figure 1 presents the results on choice of healthcare facilities in the study area. The result shows that 54 respondents representing 45% of the total respondents utilize primary health centres, 26.7% sought medical care from general hospitals, 9.2% chose self-medication while 6.7% utilized trado-medicals. This result implies that a larger proportion of the respondents utilized primary healthcare centres (PHCs) as the preferred healthcare facility. This may not be unconnected to the proximity of these PHCs to the farming households. Moreover, these PHCs are easily accessible and affordable by the farming households when compared with general hospitals and private hospitals in the study area. Aina *et al.* (2015) reported that PHCs are easily accessed, enjoyed subsidies from government and charged moderately. This result is however contrary to the findings of Oluwatayo (2015) that a good number of the respondents in Oyo and Ekiti States consult spiritualists anytime they are ill or indisposed in spite of the increased awareness on the problem associated with the source. Exworthy *et al.* (2010) also opined that general/teaching hospitals tend to have very massive patient load

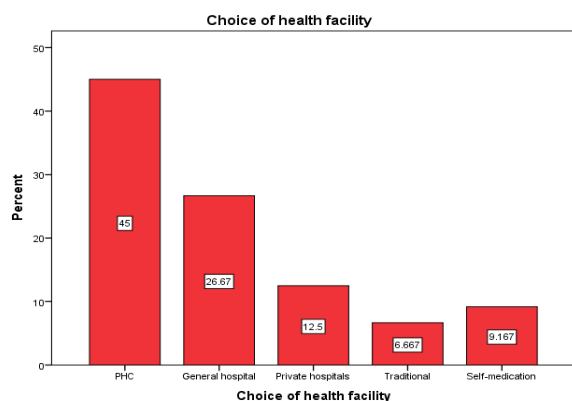


Figure 1: Healthcare facilities demanded by respondents in the study area

leading to excessive waiting time which is a very important factor in the choice of health provider among farming households and because of the high patient turn out, the provider tend to be stressed overtime and are often accused of being unfriendly.

Determinant of Choice of Healthcare Facilities in the Study Area

Results of the multivariate probit analysis on the five choices of healthcare facilities are shown in the order primary healthcare, general hospital, private hospital, trado-medicals and self-care (Table 2).

Primary healthcare

Table 2 shows that the socio-economic characteristics influencing the choice of primary healthcare as the preferred healthcare facility in the study area were age ($p < 0.01$), education ($p < 0.01$), marital status ($p < 0.05$), household size ($p < 0.05$), distance to facility ($p < 0.10$) and cost of treatment ($p < 0.01$).

Age of the respondents was positive and significant ($p < 0.01$). This implies that older farming household heads were more likely to prefer primary healthcare center than the younger ones. This could be due to the proximity of these centers to their residences as the older respondents are less agile compared to the younger ones who, being strong and conscious of the importance of good health to productivity, may not see distance as a barrier to seeking healthcare facilities outside their community. This result was confirmed by the positive influence ($p < 0.10$) of distance which implies that household heads who live closer to the PHCs prefer to utilize them during ill health. Marital status and household size also had positive influence ($p < 0.05$) on the choice of PHCs. Thus married household heads with large family size utilized PHC more than the unmarried ones with small household size and vice versa. Alarima and Obikwelu (2018) similarly reported a significant relationship between marital status and utilization of primary health care services by settled Fulani agropastoralist in Ogun State. A percentage increase in the number of married respondents and household size will increase demand for PHCs by 1.621% and 0.006% respectively.

However, educational status of the respondents and cost of treatment incurred during illness had negative relationship with the utilization of PHCs in the study area. These imply that household heads with lower level of education utilized PHCs more than the highly educated household heads. Also, the negative influence of treatment cost suggests that the choice of PHCs increases as the cost of treatment reduces. Treatment cost for ailments in the PHCs is lower and as such increase the likelihood of utilizing PHCs. This result confirms the findings of Oni and Agboje (2010) that an increase in the cost of care reduces the probability of the farming households choosing public healthcare facilities.

General hospital

The choice of general hospital by the farming households was positively determined by factors such as sex ($p < 0.10$), education ($p < 0.05$), income ($p < 0.05$), severity of ailment ($p < 0.01$) and health needs ($p < 0.01$) while it was negatively determined by distance ($p < 0.10$) and waiting time ($p < 0.10$). This result implies that male household heads with higher level of education who earned high incomes, had severe ailments and frequent health needs choose general hospitals and vice versa. The choice of general hospital however decreases with distance and waiting time. A unit increase in distance to general hospital and waiting time would reduce the probability of choosing general hospital facility by 11.1 and 38.3% respectively. This result is supported by the findings of McGlone *et al.* (2002) that general hospital is characterized by unnecessary waiting time due to large volume of patients' seeking healthcare from the facility.

Private hospital

The choice of private hospital facility was positively influenced by education ($p < 0.01$) and income ($p < 0.01$). These imply that the probability of choosing private hospital for healthcare services would increase with increase in the educational level and income of the respondents. However, age of respondents ($p < 0.05$), household size ($p < 0.10$) and belief of the cause of ailment (0.01) had inverse relationship with the choice of private hospital facility in the study area. These imply that younger household heads with small household size and who believed that their ailments were natural without spiritual undertone choose private hospitals. The negative influence of waiting time ($p < 0.10$) implies that the probability of the respondents seeking healthcare from private hospital increase with decrease in waiting time. A minute decrease in waiting time increases the probability of respondents choosing private hospital by 0.523%. The result agrees with the findings Aina *et al.* (2015) who reported that waiting time is a measure of healthcare quality. Oni and Agboje (2010) also reported that a minute decrease in the waiting time increases the probability of farming households choosing private healthcare by 0.008 unit.

Table 2: Results of the determinant of choice of healthcare facility in the study area

Parameter	PHC	General	Private	Trado-Medical	Self care
Sex	-0.328 (-1.196)	0.362* (1.925)	-0.006 (-0.018)	-0.112 (-0.267)	0.708 (0.655)
Age	0.115*** 4.037	0.035 1.541	-0.068** 2.19	0.029** 2.032	-0.024 -0.291
Education	-1.431*** 5.01	0.615** 2.42	1.197*** 4.17	-0.056** -2.124	-0.455** -2.05
Marital Status	1.621** 2.09	0.483 1.032	0.712 1.152	-0.145 -0.271	-0.534 -0.414
Household size	0.006** 2.100	0.010 0.148	-0.253* -1.85	0.004 0.497	0.009** 2.03
Income	0.000 -0.894	0.000** 2.074	0.000*** 3.020	0.000* -2.913	0.000** -2.33
Distance	0.105* 1.948	-0.111* -1.951	0.144 0.183	0.208* 2.331	-0.129 -0.280
Severity of ailments	-0.135 -1.241	0.095*** 2.869	-0.027 -0.239	0.830** 3.494	-0.442* -2.29
Belief	-0.444 -0.364	-0.148 -0.226	-0.027*** -4.858	0.331*** 2.600	0.251 0.086
Healthcare Needs	0.208 0.619	0.288*** 3.861	-0.626 -1.558	-0.107 -0.066	-1.277* -1.800
Waiting time	0.343 0.664	-0.383* -1.737	-0.523* -1.939	-0.386 -0.612	0.740 0.771
Cost of treatment	-3.438*** 2.760	0.000 0.335	0.000 0.116	-3.109** -2.16	0.000 0.951

Wald chi2 = 59.74; Log likelihood = 138.668; Prob > chi2 = 0.0001. Figures in parenthesis are Z-ratios of the coefficients.

*** Significant at 1%; ** Significant at 5%; *Significant at 10%. Source: Computed from Field Survey Data, 2017

Trado-medical

According to World Health Organization (2002), trado-medicine refers to health practices, approaches, knowledge and beliefs incorporating plant, animal and mineral based medicines, spiritual, therapies, manual techniques and exercises applied singularly or in combination to treat, diagnose and prevent illnesses or maintain wellbeing.

The significant factors influencing the choice of healthcare services from trado-medicals (spiritualist) were age ($p < 0.05$), education ($p < 0.05$), income ($p < 0.01$), distance ($p < 0.05$), belief ($p < 0.01$) and cost of treatment ($p < 0.05$). The choice of trado-medicines increases with age of the respondents, distance to the facility and belief. The positive influence of belief implies that respondents who believed that the cause of their ailments was spiritual demanded healthcare services from the traditionalist. The positive influence of distance with trado-medicals implies that respondents living farther away from public healthcare facilities patronised traditional health centers. This result agrees with the reports of Omonona *et al.* (2015) that higher proportion of rural households living farther than 14 km utilized the traditional health centers. The choice of trado-medicals however decreases with increase in the education level of the respondents, their income level and treatment cost. This implies that a year increase in the years of formal education of farming households, a naira increase in their income level, and a Naira increase in the amount charged by the trado-medicals reduce the probability of their being patronised by households. This is supported by the findings of Oluwatayo (2015) that farming households without formal education and low income earners had low welfare level hence their not patronising modern healthcare service centres.

Self-care

Determinants of self-medication, i.e., purchasing drugs from chemists or vendors without being prescribed by a qualified medical practitioner) during ill health were household size ($p < 0.05$), education ($p < 0.05$), income ($p < 0.05$), severity of ailments ($p < 0.05$) and health needs ($p < 0.10$).

The result indicates that the choice of self-medication was positively influenced by household size. This implies that the choice of self-medication increases with household size. Education level of the respondents, their incomes, severity of ailments and health needs were found to decrease the probability of choosing self-medication in the study area. Education brings enlightenment and knowledge about the dangers of self-medication during ill health. Educated respondents who earned high income and had severe ailments would probably seek healthcare from public or private hospitals

CONCLUSION

Findings from the study revealed that, majority of the farming household heads in the study area were male, in their productive age group, married, had one form of formal education or the other and 5 persons in their households. The prominent healthcare facility utilized was primary health centers. Results also revealed that age of household heads, education, household size, income, distance to healthcare facilities, cost of treatment, belief and severity of ailments were the major determinants of choice of healthcare facilities in the study area. The study therefore recommended that farming households should be encouraged to engage in other income generating activities to increase their income level as income was found to significantly determined their choice of healthcare facilities.

Also, government at all tiers should establish more healthcare facilities especially general/teaching hospitals that can provide quality services at moderate cost closer to the residents of the farmers, since findings have shown that distance to providers and costs of care significantly influence the choice of healthcare facilities in the study area.

REFERENCES

- Aina O.S., Olowa O.W., Ibrahim I. and Asana S.O. (2015). Determinant of demand for health care services among rural household in Ekiti State, Nigeria. *Journal of Biology*, **5** (7), 154-157
- Alarima C.I. and Obikwelu F.E. (2018). Assessment of utilization of primary health care services among settled Fulani agropastoralists in Ogun State, Nigeria *Agro-Science*, **17** (1), 27-34. DOI: <https://dx.doi.org/10.4314/as.v17i1.4>
- Antle J.M. and Pingali P.L. (1994). Pesticides, productivity, and farmers' health a philippine case study. *Am. J. Agric. Econ.*, **76**, 418- 430
- Asenso-Okyere K., Chiang C., Thangata P. and Andam K.S. (2011). Interactions between health and farm-labour productivity. International Food Policy Research Institute, Washington, DC
- Bir A. and Eggleston K. (2002). *Public/Private Corporation: Theory and Evidence on the Quality Impact of Dual provision in Indonesia*. Harvard Medical School, Department of Healthcare Policy, Boston Massachusetts, USA; pp. 12-67
- CIA World Factbook (2018). <http://www.indexmundi.com>. Accessed 15th February, 2018
- Cole D. (2006). Occupational health hazards of agriculture. In: Hawkes C. and Ruel M.T. (eds.), *Understanding the Links between Agriculture and Health for Food, Agriculture, and the Environment*. 2020 Focus 13, International Food Policy Research Institute, Washington, DC
- Exworthy M. and Peckham S. (2010). Access, choice and travel: implications for health policy. *Social Policy & Administration*, **40** (3), 267-287
- Gallup J.L., and Sachs J.D. (1990). The economic burden of malaria. *J. of the American Mosquito Control Association, Supplement*, **2**, 1-9
- McGlone T.A., Butler E.S. and McGlone V.L. (2002). Factors influencing consumers' selection of a primary care physician. *Health Mark Q.*, **19**, 21-37
- Nguyen T., Lofgren C., Lindholm L. and Thi Kim Chuc N. (2008). Choice of healthcare provider following reform in Vietnam, BMC Health Service Research at <http://www.biomedcentral.com/1472-6963/8/162>
- Oluwatayo I.B. (2015). Healthcare service delivery system and households' welfare status in urban Southwest Nigeria. *J. Hum. Ecol.*, **50** (2), 181-187
- Omonona B.T., Obisesan A.A. and Aromolaran O.A. (2015). Healthcare access and utilization among rural households in Nigeria. *J. Dev. Agric. Econ.*, **7** (5), 195-203
- Oni O.A. and Agboje I.A. (2010). Determinants of choice of healthcare providers among farming and non-farming households: Evidence from selected rural areas of Ibadan, Oyo State. *NJAFE*, **6** (1&2), 33-46
- Salihu O.A. and Sanni N.A. (2013). Malaria burden and the effectiveness of malaria control measures in Nigeria: A case study of Asa Local Government Area of Kwara State. *Journal of Economics & Sustainable Development*, **4** (3), 295-308
- World Health Organization (2000). Improved access to maternal health services. WHO 98.7. Geneva: WHO agriculture and Healthcare
- World Health Organization (2002). Traditional medicine strategy, 2002-2005
- World Health Organization (2016). Global health observatory. <https://www.who.int/countries/nga> Accessed 14th January, 2019