



OUT OF POCKET PAYMENTS AND THE UTILIZATION OF HEALTHCARE SERVICES AMONG FARMERS IN OYO STATE

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ABSTRACT

The main question addressed here is the effect of Out of Pocket Payments on the Utilization of Healthcare Services among farmers in Oyo State. A multistage random sampling technique was used to solicit responses from 140 farmers on the type and degree of utilization of the various types of healthcare services available to the farmers, the determinants of Out of Pockets Payments and the factors influencing the utilization of six classes of healthcare services. The distance to healthcare services, frequency of visit by farmers, the quality of treatment, cost of treatment, the availability of healthcare services, type of healthcare services and the method of financing healthcare services were found to significantly affect the utilization of healthcare services among farmers in Oyo State while cost of treatment, quality of treatment, distance to healthcare services and age are the factors determining Out of Pocket Payments by the farmers. The study therefore recommends that efforts should be made to provide accessible primary healthcare service centres such that the farmers do not have to walk more than 1 km to access healthcare services. Also, improved healthcare facilities and competent medical personnel should be provided for the farmers at little or no cost so as to improve the utilization rate by farmers who cannot afford medical care. This will in turn increase the productive capacity of the farmers thereby increasing the GDP of Oyo state and Nigeria at large.

INTRODUCTION

In addition to other basic needs of man like shelter, clothing and food, health is a basic need that is very important. Health is desirable by all people and as such every citizen is entitled to enjoy good health, protection from diseases and proper medical care for survival, personal growth and development. Health according to World Health Organization is a state of complete physical, mental, social and spiritual well-being, not merely the absence of disease or infirmity (Lucas and Gilles, 2004). Increased productivity by individual in all sectors of the economy depends on the health condition of the labour force. Improved health and quality of life depends to a great extent on the availability of, and accessibility to healthcare facilities at affordable cost. The impact of inaccessible healthcare service has already taken its toll in the developing countries. For instance, Benachi and Yasui (1999) have identified that there is a positive correlation between deprivation and mortality rate. They also found that there are inequalities in other aspects related to healthcare, such as waiting list times or the access to preventive health services.

Most developing countries of the world particularly Africa, faces more serious health problems unlike the developed countries. Some of which are lower life expectancies, higher infant mortality rates and a greater risk of disease than people in most of the other parts of the world. Many people in Africa suffer from preventable diseases, which are rare or easily treated in the developed countries: diseases like cholera, diarrhoea and malaria. Particularly hard hit by some of these diseases are African's children, many of whom die before reaching 5 years of age (Ajala *et al*, 2005). The main asset of the poor is clearly their labour and both education and health services improve the productivity and earnings of workers. Examples of such studies include Jack (1999), Filmer and Pritchett (1999), Gupta *et al*. (1999), Makinen *et al*. (2000), and Gwatkin (2000). Thus, public spending aimed at improving the education and health of people leads to a better quality of life as well as positively influences economic development of a country. Education and health are important tools to empower poor people and overcome exclusion based on gender, location, and other correlates of poverty. In many developing countries, Nigeria inclusive, the public sector is still a major provider of education and health. But empirical evidence on the impact of public spending on the health status of a country's population is mixed (Lloyd, 2009).

Out Of Pocket Payments (OOPPs) is the major payment strategy for healthcare in Nigeria. The real challenge of healthcare financing in Nigeria as in many countries in sub-Saharan Africa (SSA) lies not primarily in the acute scarcity of resources, but in the absence of intermediation and insurance mechanisms to manage risk, and inefficient resource allocation and purchasing practices (Soyibo, 2004). Out of Pocket Payments (OOPPs) for healthcare increased with the introduction of user fees in the health sector and like most African countries, Nigeria introduced user fees as a mode of financing government health services within the framework of the Bamako Initiative revolving drug funds (Akpala *et al*, 2002). The healthcare utilization rate of the entire population, regardless of whether or not the individual has been ill or injured, is very low. The poor are less likely to visit a healthcare provider than the rich, as the main barrier to access healthcare is its affordability. Also, new mechanisms to finance the health system will be needed (Ojowu *et al*, 2007). Findings from this research will help the government to design and execute an effective policy that will improve on the utilization of health care services among farmers in Oyo State, in turn enhancing productivity. This study will provide data to serve as reference materials to researchers and students on improvement in the type, quality and number of healthcare services that could be available to farmers from well-informed rural health policy would translate into more income for the farmer, higher output and national productivity and ultimately national development. The main questions addressed in this article therefore are:

What are the various methods of financing healthcare services in Oyo state? Are there adequate healthcare facilities in the rural areas? What are the types and degree of utilization of healthcare services in Oyo state? What are the factors that determine the method of financing healthcare services in the rural

areas? What is the effect of Out Of Pocket Payments (OOPPs) on a farmer's utilization of healthcare services?

MATERIALS AND METHODS

Study Area: Oyo state which was formed from the former Western State, and originally included Osun State, which was split off in 1991. Oyo state is an inland state with Coordinates 8°N 4°E in south-western Nigeria, with its capital at Ibadan created on 3rd February, 1976. Oyo State covers approximately an area of 28,454 square kilometres and ranked 14th by size. Oyo state has a population of about 5,591,589 people (NPC, 2006). The state which consists of thirty three Local Government Areas is made up of four (4) agro-ecological zones; Oyo, Ogbomoso, Saki and Ibadan- Ibarapa zones.

Data and Sampling Procedures: The study was based on primary data collected through a well-structured questionnaire. A Multistage Simple Random Sampling technique which entails random selection of two of the four agro-ecological zones of the state, random selection of two Local Government Areas, one each from the selected agro-ecological zones and random sample of 70 farmers from each of the selected LGA making a total of 140 respondents from which the questionnaire was used to solicit responses.

Method of data analysis: The analytical technique used in this study includes descriptive statistics such as frequencies, means, percentages, pie charts and tables, used to analyze the socioeconomic characteristics of the respondents. Also econometric analysis using Probit regression and Multinomial logit regression was used to estimate the determinant of Out of Pockets Payments and the Effect of Out of Pockets Payments on the utilization of Healthcare services respectively.

The Probit model: The Probit model is a log-linear approach used to measure the effects of the independent variables on the dependent variable. The Probit regression analysis, was used since the OLS estimating procedure will be inappropriate as the dependent variable is dichotomous. In this model, Out Of Pocket Payments (OOPPs) represents the dependent variable (Y). The model was estimated with the assumption that Y, Out Of Pocket Payments (OOPPs) for healthcare services, is related to the following variables, explicitly stated as:

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_n X_{ni} + v$$

Y_i = Out Of Pocket Payments (OOPPs = 1, 0 otherwise)
 $X_{1i}, X_{2i} \dots X_{ni}$ = vectors of explanatory variable
 $\beta_0, \beta_1, \dots, \beta_n$ = coefficients of the explanatory variables

where:

X_1 = Gender of house head (1 = male, 0 = otherwise)

X_2 = Age of farmer (years)

X_3 = Marital status

X_4 = Educational status

X_5 = Family size

X_6 = Income and output (₦/ kg)

X₇ = Distance to healthcare centre (km)

X₈ = Cost of treatment (₦)

X₉ = Frequency of visit

X₁₀ = Quality of treatment

X₅ = Family size

X₆ = Income and output (₦/ kg)

X₇ = Distance to healthcare centre (km)

X₈ = Cost of treatment (₦)

X₉ = Frequency of visit

X₁₀ = Quality of treatment

Multinomial logit model: In the Multinomial logit model we assume that the log-odds of each response follow a linear model

$$h_{ij} = \log \frac{p_{ij}}{p_{iJ}} = \alpha_j + \mathbf{x}_i \beta_j, \quad (2)$$

where α_j is a constant and β_j is a vector of regression coefficients, for $j = 1, 2, \dots, J-1$. The probability distribution of the response is multinomial instead of binomial and we have $J-1$ equations instead of one. The $J-1$ multinomial logit equations contrast each of categories 1, 2, $J-1$ with category J . Note that we need only $J-1$ equations to describe a variable with J response categories and that it really makes no difference which category we pick as the reference cell, because we can always convert from one formulation to another

Modelling the Probabilities: The multinomial logit model may also be written in terms of the original probabilities p_{ij} rather than the log-odds. Adopting the convention that $h_{iJ} = 0$, we can write

$$p_{ij} = \frac{\exp\{h_{ij}\}}{\sum_{k=1}^J \exp\{h_{ik}\}}. \quad (3)$$

The J categories for this study will be (0, 1, 2, 3, 4, 5, 6) where 0 will be for the Government healthcare services, 1 for the Private healthcare services, 2 for the Traditional healthcare services, 3 for the combination of government and private healthcare services, 4 for the combination of government and traditional healthcare services, 5 for the combination of the three major forms of healthcare services and 6 for self care.

The government healthcare services will serve as the reference group. Where:

X₁ = Gender of house head (1 = Male, 0 = otherwise)

X₂ = Age of farmer (years)

X₃ = Marital status of farmer

X₄ = Educational status of farmer

X₅ = Religion of farmer

- X₆ = Family size
- X₇ = Income and output (₦ / kg)
- X₈ = Availability of healthcare services (1 = Yes, 0 = otherwise)
- X₉ = Types of healthcare services
- X₁₀ = Distance to healthcare centre
- X₁₁ = Mode of financing healthcare services (OOPs= 1, 0 otherwise)
- X₁₂ = Quality of healthcare services
- X₁₃ = Frequency of visit
- X₁₄ = Cost of treatment

RESULTS AND DISCUSSIONS

Socioeconomic Characteristics of Respondents: The average age of the farmers interviewed is 40 years, with 3.57% of the farmers being >70 years. Table 1 show that majority of farmers (32.86%) were ≤30 years old. Also, 72.86% of the farmers interviewed were males while 27.14% were females. The no of years of schooling of the respondents revealed that 45.71% of the farmers interviewed were able to undergo at most 12 years of schooling; this implies that they must have completed their secondary level of education. 24.29% of the respondents only stopped at the primary school level (six years of schooling), the remaining 27.14% and 2.86% were able to spend at most 18 and 24 years of schooling respectively. The mean number of person per family is 6 with majority of the farmers having a family size of between 5 to 9 persons representing 55.71% of the respondents' while 27.86% had between 0 and 4 persons in their family. 50% were Christians, 39.29% were Muslims and 6.92% were Traditional worshippers. This implies that the religion of a farmer is expected to play an important role in the utilization of the available types of healthcare services in the area. This is because traditional worshippers tend to use more of traditional healthcare services.

Monthly income and Expenditures of the farmers: Table 2 reveals that 34.28% were found to be earning between ₦20,000 and ₦29,999, while 26.43% of the respondents earn between ₦10,000 and ₦19,999 and 20 % earn between ₦30,000 and ₦39,999 with a larger percentage of the respondents earn between ₦10,000 and ₦39,999 which might be low for catering for the needs of the farmers. This is because as seen earlier, majority of the farmers has a family size of about 9 persons. Majority (31.37%) of the mean monthly expenditures was spent on food while only 7.72% was spent on healthcare. This revealed that the amount spent on healthcare, electricity, clothing, education, water, accommodation and transportation is still very low compared to that spent on food.

Types of Healthcare services Available and Methods of Financing Healthcare services: Majority (50.82%) has government healthcare services available in their area while 27.05% for private healthcare services and 13.93% for traditional healthcare services as shown in table 4. Also, majority of the respondents (62.64%) pay for healthcare services by cash also known as Out of Pocket Payments. 24.14% has their healthcare services funded by the government with only 0.58 per cent paying through insurance services as shown in table 3. This implies that for farm settlements without government healthcare centres,

the farmers either pay cash (out of pocket) or uses the traditional healthcare services which also involves payment in kind (this is also a form of paying out of pocket) representing 12.64%.

Type and Degree of Utilization of Healthcare Services by Farmers: This section consists of the types of healthcare services available and their degree of utilization.

Frequency of visit and Utilization of Healthcare Services by Farmers: The utilization of healthcare services is in five degrees based on the frequency of visit as:

1: comprises of the group who do not visit the healthcare centre at all and those who visited any of the healthcare services at most once every six (6) month.

2: comprises of the group who visits at least once every five month any of the healthcare centres and those who visited any of the healthcare services at most once every three (3) month.

3: comprises of the group who visits at least once every two month any of the healthcare centres and those who visited any of the healthcare services at most twice (2) every month.

4: comprises of the group who visits at least three times every month any of the healthcare centres and those who visited any of the healthcare services at most four (4) times every month.

5: those who visited any of the healthcare services at least five (5) times every month.

Table 5 shows that majority of the respondents, 54.02, 45.27 and 63.64 per cent under degree 3 utilize the government, private healthcare services and self care respectively at least once every two months and at most twice every month. On the other hand, respondents who visited any of the government, private, traditional and self care services at least three times every month and at most four times every month (weekly) represents 8.05 per cent, 1.89 per cent, 20 per cent and 9.09 per cent respectively. This implies that the frequency of utilization of the types of healthcare services by respondents is influenced by the frequency of illness and the degree of illness as seen in the percentage of respondents who would rather stick to self care services (63.64 per cent) if they had to visit healthcare centres about twice in a month (biweekly). Also, majority of the respondent utilize government healthcare centres because treatments though of low quality are subsidised by government.

Years Spent Schooling and the Utilization of Healthcare Services among Farmers: Table 6 shows that farmers who had attained 7 – 12 years of schooling represents 42.86 per cent for those using the government healthcare services, 45.65 per cent for those using the private healthcare services, 62.96 per cent for those using traditional healthcare services and 33.33 percent for those using self care services. This group represent majority of those using the various form of healthcare services available to the farmer. Also, those who had attained 0 – 6 years of schooling represents 28.57 per cent for those using the government healthcare services, 13.04 per cent for those using private healthcare services, 14.81 per cent for those using the traditional healthcare services and 44.45 per cent for those using self care services. While those who had attained 13 – 18 years of schooling represents 25.00 per cent for those using the government healthcare

services, 41.30 per cent for those using private healthcare services, 18.52 per cent for those using the traditional healthcare services and 22.22 per cent for those using self care services. Those who had attained 19 – 24 years of schooling represents 3.57 per cent for those using the government healthcare services, 0 per cent for those using private healthcare services, 1 per cent for those using the traditional healthcare services and 0 per cent for those using self care services.

Income and the Utilization of Healthcare Services among Farmers: Table 7 shows that farmers who earn between ₦0 - ₦9,999 represents 6.59 per cent for those using the government healthcare services, 0 per cent for those using the private healthcare services, 7.40 per cent for those using traditional healthcare services and 10 per cent for those using self care services. Majority of the farmers earn between ₦20,000 and ₦29,999 representing 32.97 per cent of those using the government healthcare services, 28.57 per cent of those using the private healthcare services, 40.74 per cent of those using traditional healthcare services and 40 per cent of those using self care services. Also, farmers who earn ₦60,000 and above represents 3.30 per cent of those using the government healthcare services, 6.12 per cent of those using private healthcare services, 3.70 per cent of those using the traditional healthcare services and 0 per cent of those using self care services. This implies that a farmer's income has a major role to play in the type of healthcare services he or she uses.

Cost of treatment and the Utilization of Healthcare Services among Farmers: Table 8 shows that farmers paying between ₦0 - ₦9,99 (majority) represents 65.22 per cent for those using the government healthcare services, 56.25 per cent for those using the private healthcare services, 59.26 per cent for those using traditional healthcare services and 60 per cent for those using self care services. While farmers who pay between ₦3,000 and ₦3,999 representing 4.35 per cent of those using the government healthcare services, 4.17 per cent of those using the private healthcare services, 7.41 per cent of those using traditional healthcare services and 10 per cent of those using self care services. This implies that the lesser the cost of treatment, the better utilized the healthcare services available to the farmers.

Determinant of Out of Pocket payments for healthcare services: The pseudo R^2 (adjusted coefficient of determination) reveals that the included variables explained 23.32% of the variations in the out of pocket payments probability. The variables that showed statistical significance are the age of the farmer, the distance to healthcare services (disttohc), quality of treatment (qtrtmt) and the cost of treatment (coftrtmt). The age of the farmer was significant at 1% with an inverse relationship with the farmer paying for healthcare services out of pocket. This implies that the probability of a farmer to pay out of pocket for healthcare services decreases by 3.46% with one per cent increase in the farmer's age. As the age of the farmer increases he/she is aware of his health status and so do not have to pay out of pocket because he/she often take preventive measures to avoid falling ill frequently.

Also the cost of treatment was significant at 1% with an inverse relationship with the farmer paying for healthcare services out of pocket. This implies that the probability that a farmer would pay for healthcare

services out of pocket decreases by 0.05% if the cost of treatment increases by one per cent. This is because majority of the farmer's income is spent on feeding and so do not have enough to pay as the cost of services increases. The quality of treatment was significant at 5% with a direct relationship with the probability of the farmer paying out of pocket for healthcare services. This implies that the probability that a farmer pays out of pocket increases by 71.22% with a percentage increase in the quality of treatment. Similarly, the distance to healthcare services was significant at 10% with an inverse relationship. This implies that the probability that a farmer pays out of pocket decreases by 2.98% as the distance to healthcare service centre increases by 1%. This means that utilization of healthcare services decreases with increase in distance to healthcare centres.

The marginal effects show the change in the dependent variable for a 1 unit change in the value of the predictor variable. Table 4.8 also reveals that for age (with a mean of 40 years) and the cost of treatment (with a mean of ₦1,359.64) which was significant at 1 per cent, that is a unit increase in the value of the mean of the farmer's age and the cost of treatment decreases the probability of a farmer paying out-of-pocket by 1.03 and 0.02 per cent respectively holding other variables constant. This implies that isolating the age and cost of treatment alone is not enough to determine whether a farmer would be willing to pay out-of-pocket or not. The quality of treatment (with mean of 0.5643) was also significant at 5 per cent implying that an increase in the quality of treatment a unit increase in the value of the mean increases the probability that a farmer pays out-of-pocket for healthcare services by 21.70 per cent holding other variables constant. The distance to healthcare services (with mean 6.2395 km) was also significant at 10 per cent implying that an a unit increase in the value of the mean in the distance to healthcare services decreases the probability of a farmer paying out-of-pockets by 0.89 per cent. This also implies that when the quality of care is high farmer are more willing to pay out-of-pockets to regain their health for effective productivity.

The Effect of Out of Pocket Payments on the Utilization of Healthcare services: The result of the effect of Out of Pocket Payments (OOPPs) on the utilization of healthcare services using the multinomial logit model in table 10 shows that the Chi square was 238.17 at 84 degree of freedom and significant at 1%, this implies that all the independent variables jointly accounts for the variation in the dependent variables.

A farmer's choice of private healthcare services was affected by the gender which was significant at 5%. This has a direct relationship with the utilization of private healthcare services; this implies that more male

farmers use the private healthcare services thereby showing less preference for the government healthcare services than the female farmers. Also, the availability of healthcare services (availofh) was significant at 5% and has an inverse relationship with the utilization of private healthcare services. This implies that an increase in the availability of healthcare services to the farmers reduces the preference a farmer has for using private healthcare services and increases the preference for the utilization of government healthcare services. The type of healthcare services (typehc) and method of financing healthcare services (finanhc) were also significant at 1% and have direct relationships with the utilization of private healthcare services. Also, the distance to healthcare service centre (disttohc) is significant at 5%. This implies that an increase in the type of healthcare services, distance to healthcare centre and method of financing healthcare services (in this case we have Out of Pocket Payments (OOPPs) as 1, 0 otherwise) result in increased preference for the utilization of private healthcare services than for the government healthcare services. Finally, a farmer's choice of private healthcare services was affected by the cost of treatment (coftrtmt), significant at 5% with an inverse relationship with the utilization of private healthcare services. This implies that an increase in the cost of treatment a farmer receives decreases the preference for the utilization of private healthcare services compared to the government healthcare services.

A farmer's choice of traditional healthcare services was influenced by the religion of the farmer and significant at 5%. This has a direct relationship with the utilization of traditional healthcare services. This implies that with differences in religion the farmer's preference for traditional healthcare services increases and the preference for government healthcare services reduces. Similarly, the availability of healthcare services (availofh) and the type of healthcare services (typehc) were significant at 1% with the type of healthcare services having a direct relationship with the utilization of traditional healthcare services while the availability of healthcare services (availofh) has an inverse relationship with the utilization of traditional healthcare services. This implies that an increase in the type of healthcare services available to the farmer gives the farmer more preference for traditional healthcare services and less for government healthcare services. For the availability of healthcare services (availofh) an increase in the number of healthcare services available to the farmer decreases the farmer's preference for traditional healthcare services and increases the farmer's preference for the utilization of government healthcare services. Similarly, frequency of visit (fofvisit) and the cost of treatment (coftrtmt) were significant at 5%. The frequency of visit (fofvisit) has an inverse relationship with the utilization of traditional healthcare services while the cost of treatment (coftrtmt) has a direct relationship. This implies that an increase in the frequency of visit reduces the preference of the farmer for traditional healthcare services and increases the preference for the utilization of government healthcare services. While an increase in the cost of treatment (coftrtmt) will increase the farmer's preference for traditional healthcare services compared to that of government healthcare services.

The factors affecting the utilization of a combination of government and private healthcare services were; the availability of healthcare services (availofh), type of healthcare services (typehc), distance to healthcare services (disttohc) and the quality of treatment (qtrtmt). The availability of healthcare services was significant at 5% with an inverse relationship with the utilization of government and private healthcare services. This implies that increase in the availability of healthcare services gives a farmer less preference for the utilization of both government and private healthcare services and more preference for the utilization of government healthcare services. The distance to healthcare service centre and quality of treatment were also significant at 5% and 10% respectively but with a direct relationship with the utilization of both government and private healthcare services. This implies that increase in the distance to healthcare services and quality of treatment gives a farmer more preference for the utilization of both government and private healthcare services than for government healthcare services. The type of healthcare services available to the farmer was also significant at 1% with a direct relationship with the utilization of both government and private healthcare services. This implies that an increase in the type of healthcare services increases a farmer's preference for both government and private healthcare services than for the government healthcare services.

The utilization of the combination of government and traditional healthcare services was affected by gender, religion, availability of healthcare services (availofh), type of healthcare services (typehc) and distance to healthcare services (disttohc). The gender and religion of the farmer were significant at 10% but while the gender of farmer has a direct relationship with the utilization of both government and traditional healthcare services the religion of the farmer has an inverse relationship. This implies that more male farmers have increased preference for the utilization of both government and traditional healthcare services compared to the government healthcare services alone. The type of healthcare services and the distance to healthcare service centre were significant at 1% with a direct relationship with the utilization of the combination of government and traditional healthcare services. This implies that increase in the type of healthcare and distance to healthcare centre gives the farmer more preference for the utilization of a combination of government and traditional healthcare services than for the utilization of government healthcare services. In addition, the availability of healthcare service was significant at 5% with an inverse relationship with the utilization of a combination of both government and traditional healthcare services. This implies that an increase in the availability of healthcare services gives the farmer less preference for the utilization of the combination of government and traditional healthcare services and more preference for the utilization of government healthcare services.

Gender, availability of healthcare services (availofh), type of healthcare services (typehc) and distance to healthcare centre (disttohc) are the factors affecting the farmer's choice of self care utilization. Gender was significant at 5% with a direct relationship with the utilization of self care; this implies that more male

farmers has increased preference for the utilization of self care than for the utilization of government healthcare services. The distance to healthcare centre was significant at 10% with a direct relationship with the utilization of self care. This implies that an increase in the distance to healthcare centre increases the preference for self care by farmers and less preference for the utilization government healthcare services. The type of healthcare services and availability of healthcare services were both significant at 1% with the availability of healthcare services having an inverse relationship with the utilization of self care which implies that an increase in the number of healthcare services available gives the farmer less preference for self care and more for government healthcare services. The type of healthcare service on the other hand, has a direct relationship with the utilization of self care which implies that an increase in the type of healthcare available gives a farmer more preference for self care than for government healthcare services.

Table 1: Socioeconomic Characteristics of Farmers

S/No	Characteristics	Frequency	Percentages (%)
1	Gender		
	Male	102	72.86
	Female	38	27.14
	Total	140	100.00
2	Age (years)		
	≤ 30	46	32.86
	31- 40	40	28.57
	41-50	20	14.29
	51-60	17	12.14
	61-70	12	8.57
	>70	5	3.57
	Total	140	100.00
3	Years spent schooling		
	0 – 6	34	24.29
	7 – 12	64	45.71
	13 – 18	38	27.14
	19 – 24	4	2.86
	Total	140	100.00
4	Farmer's Family Size		
	0 – 4	39	27.86
	5 – 9	78	55.71
	10 – 14	19	13.57
	15 – 19	3	2.14
	20 – 24	0	0.00
	> 25	1	0.72
Total	140	100.00	
5	Religion		
	Christianity	70	50.00
	Islam	55	39.29
	Traditional	9	6.42
	Others	6	4.29
Total	140	100.00	
6	Total Monthly Income		
	0 – 9,999	7	5.00
	10,000 – 19,999	37	26.43

	20,000 – 29,999	48	34.28
	30,000 – 39,999	28	20.00
	40,000 – 49,999	11	7.86
	50,000 – 59,999	3	2.14
	> 60,000	6	4.29
	Total	140	100.00

Source: Field Survey, 2010

Table 2: Mean Monthly Expenditures of Farmers

Items	Mean monthly expenditure (₦)	Percentage of total expenditure (%)
Food	6618.43	31.37
Clothing	2861.07	13.56
Education	4180.74	19.82
Healthcare	1627.86	7.72
Transportation	2795.00	13.25
Accommodation	1526.07	7.23
Electricity	887.86	4.21
Water	481.79	2.28
Others	117.86	0.56
Total	21096.68	100

Source: Field Survey, 2010

Table 3: Method of financing Healthcare Services by Farmers

S/No	Method of Financing Healthcare Services	Frequency	Percentages (%)
1	Government funding	42	24.14
2	Insurance	1	0.58
3	Donor funding	0	0.00
4	Cash	109	62.64
5	Kind	22	12.64
	Total	174	100.00

Source: Field Survey, 2010

Table 4: Types of Healthcare Services Available to Farmers

Types of Healthcare Services Available		
Government	62	50.82
Private	33	27.05
Traditional	17	13.93
Self care	10	8.20
Total	122	100.00

Source: Field Survey, 2010

Table 5: Frequency of visit and Utilization of Healthcare Services by Farmers

Degree of Utilization	Types of Healthcare services

	Government Healthcare Services		Private Healthcare Services		Traditional Healthcare Services		Self Care		Total	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
1	13	14.94	14	26.42	3	20	5	22.73	35	19.77
2	20	22.99	13	24.53	6	40	1	4.54	40	22.60
3	47	54.02	24	45.27	3	20	14	63.64	88	49.72
4	7	8.05	1	1.89	3	20	2	9.09	13	7.34
5	0	0.00	1	1.89	0	0	0	0	1	0.57
Total	87	100	53	100	15	100	22	100	177	100

Source: Field Survey, 2010

Table 6: Years Spent Schooling and the Utilization of Healthcare Services among Farmers.

Years spent Schooling	Types of Healthcare services								Total	
	Government Healthcare Services		Private Healthcare Services		Traditional Healthcare Services		Self Care			
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
0 – 6	24	28.57	6	13.04	4	14.81	4	44.45	38	22.89
7 – 12	36	42.86	21	45.65	17	62.96	3	33.33	77	46.39
13 – 18	21	25.00	19	41.30	5	18.52	2	22.22	47	61.04
19 – 24	3	3.57	0	0	1	3.70	0	0	4	2.41
Total	84	100	46	100	27	100	9	100	166	100

Source: Field Survey, 2010

Table 7: Income and the Utilization of Healthcare Services among Farmers

Income (₦)	Types of Healthcare services								Total	
	Government Healthcare Services		Private Healthcare Services		Traditional Healthcare Services		Self Care			
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
0 – 9,999	6	6.59	0	0	2	7.40	1	10	9	5.08
10,000 – 19,999	25	27.47	13	26.53	6	22.22	3	30	47	26.55
20,000 – 29,999	30	32.97	14	28.57	11	40.74	4	40	59	33.33
30,000 – 39,999	16	17.58	12	24.50	5	18.52	2	20	35	19.77
40,000 – 49,999	9	9.89	6	12.24	2	7.41	0	0	17	9.60
50,000 – 59,999	2	2.20	1	2.04	0	0	0	0	3	1.69
≥ 60,000	3	3.30	3	6.12	1	3.70	0	0	7	3.95
Total	91	100	49	100	27	100	10	100	177	100

Source: Field Survey, 2010

Table 8: Cost of treatment and the Utilization of Healthcare Services among Farmers

Cost of	Types of Healthcare services
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treatment (₦)									Total	
	Government Healthcare Services		Private Healthcare Services		Traditional Healthcare Services		Self Care			
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
0 – 9,99	60	65.22	27	56.25	16	59.26	6	60	109	61.58
1,000 – 1,999	14	15.22	8	16.67	4	14.81	2	20	28	15.82
2,000 – 2,999	10	10.87	7	14.58	4	14.81	1	10	22	12.43
3000 – 3,999	4	4.35	2	4.17	2	7.41	1	10	9	5.08
4,000 – 4,999	1	1.09	3	6.25	1	3.70	0	0	5	2.82
5,000 – 5,999	0	0	1	2.08	0	0	0	0	1	0.56
≥6,000	3	3.26	0	0	0	0	0	0	3	1.69
Total	92	100	48	100	27	100	10	100	177	100

Source: Field Survey, 2010

Table 9: Determinant of Out of Pocket payments for healthcare services among farmers

Variables	Estimates	Marginal Effects	Mean values
Gender	-0.3138 (0.3535)	-0.0880 (0.0927)	0.7286
Age	-0.0346 (0.0124)***	-0.0103 (0.0037)***	40.4857
Maristat	0.5588(0.3416)	0.1662 (0.1005)	0.8214
Yrschlin	-0.0209 (0.0286)	-0.0062 (0.0085)	10.3929
Income	-6.21e-06 (5.64e-06)	-1.85e-06 (1.69e-06)	28620.1
Disttohc	-0.0298 (0.0180)*	-0.0089 (0.0053)*	6.2395
Fofvisit	-0.1144 (0.0858)	-0.0340 (0.2648)	1.2749
Qtrtmt	0.7122 (0.2752)**	0.2170 (0.0824)**	0.5643
Coftrtmt	-0.0005 (0.0002)***	-0.0002 (0.0001)***	1359.64
Familyno	0.0238 (0.0355)	0.0071 (0.0106)	6.2571
Constant	2.80 (0.6652)		

Source: Field Survey, 2010

LR chi² (9) = 37.71, Prob > chi² = 0.0000***, Log likelihood = -61.9935

Pseudo R² = 0.2332, *** Significant at 1 per cent, ** Significant at 5 per cent and * Significant at 10 per cent

RECOMMENDATIONS

Based the findings, the following recommendations are made. The government should endeavour to provide accessible primary healthcare service centre so that the farmers do not have to walk more than 1 km to access healthcare services. The government should also provide improved healthcare facilities and competent medical personnel for the farmers at little or no cost so as to improve the utilization rate by farmers who cannot afford medical care. The government should also embark on rural enlightenment programmes that can help the farmers with community based insurance schemes which would help increase the accessibility and utilization rate of healthcare services in the study area.

CONCLUSION

The study revealed that out of pocket payment is a major determinant of the utilization of healthcare services among farmers in Oyo state. Majority of the farmers do not have adequate access to improved healthcare

services and for the limited ones that are available, there is the problem of high costs thereby making it inaccessible. The farmers often time result to self care and traditional healthcares services thereby reducing the productive capacity of the farmers in the area. It can therefore be concluded from this study that the cost of treatment is a major constraint for the utilization of improved healthcare services in the study area.

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