

## Determinants of the Utilization of Healthcare Services among Farmers in Oyo State, Nigeria

Omoniwa A. E<sup>1</sup> and Awoyemi T. T<sup>2</sup>

<sup>1</sup>Department of Agricultural Economics, University of Ilorin, Nigeria.

<sup>2</sup>Department of Agricultural Economics, University of Ibadan, Nigeria.

Corresponding Author: Omoniwa, A. Esther, Email: [adeyemi.omotade@yahoo.com](mailto:adeyemi.omotade@yahoo.com)



Abstract

Received: 8 September 2013,  
Reviewed: 11 November 2013,  
Revised: 21 November 2013,  
Accepted: 29 December 2013

The main asset of farmers is their labour and the utilization of healthcare services will help to improve their health and thus productivity. Some of the problems inhibiting proper utilization of healthcare services in Nigeria include non-availability, inaccessibility and high cost of medical care. The aim of this paper is to examine the determinants of the Utilization of Healthcare Services among farmers in Oyo State. A multistage random sampling technique was used to solicit responses from 140 farmers across two agro-ecological zones of Oyo State. The distance to healthcare services, 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 influence the utilization of healthcare services among farmers in Oyo State. 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 long distances 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.

**Keywords:** Farmers, Utilization, Healthcare, Accessible

### 1. Introduction

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). Improved health and quality of life depends to a great extent on the availability of, and accessibility to healthcare facilities at affordable cost. 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).

In most developing countries, Nigeria inclusive, the public sector is still a major provider of education and health. 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 (majority of which are farmers and reside in the

rural areas) are less likely to visit a healthcare provider than the rich. Studies have shown that seventy per cent of the total population in Nigeria still lives in the rural areas. These rural areas are blessed with abundant mineral resources but yet suffer from different kinds of deprivation with quality of services for many rural people considerably poorer than for urban areas (Okafor and Onakerhoraye, 1980). Sources of water supply in most rural areas are streams, rivers, shallow wells and rain water, which are often subject to climate variations making many of them unsafe for domestic uses. These unsafe sources of rural water supply are responsible for high prevalence of diseases in these areas. Also, lack of social infrastructural facilities (such as water, electricity, roads and healthcare) in the rural areas has not been attracting personnel in the few available institutions. When these personnel are posted to these rural areas, they prefer to live in nearby urban centres and continue to shuttle between the urban centre and their location of posting. This shuttling does not allow for meaningful contribution to the health and welfare of the rural people. Hence these rural areas are characterized by high illiteracy and mortality rates (Agbonoga, 1998).

Findings from this research will help the government to design and execute an effective policy that will improve on the utilization of healthcare services among farmers in Oyo State, in turn

enhancing productivity. It will also serve as reference materials to researchers and students on the need to improve the type and quality 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 ultimately national development. The main questions addressed in this article therefore are:

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 determinants of healthcare utilization in the rural areas?

**2. Materials and methods**

**2.1 Study Area:** Oyo state was formed from the former Western State with coordinates 8°N 4°E in south-western Nigeria, with its capital at Ibadan. Oyo State covers approximately an area of 28,454 square kilometres and 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.

**2.2 Sample size and Sampling Procedures:** The study was based on primary data collected through a questionnaire and personal interview of the farmers. A Multistage Simple Random Sampling technique resulting in the selection of 140 respondents from two agro-ecological zones in the area was employed in the study.

**2.3 Method of data analysis:** The analytical techniques used in this study include:

Descriptive statistics such as frequencies, means, percentages, and tables which was used to analyze the socioeconomic characteristics of the respondents as well as the type and degree of utilization of various types of healthcare services.

Multinomial logit model which was used to assess the determinant of the utilization of healthcare services among farmers in Oyo State.

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

$$h_{ij} = \log \frac{p_{ik}}{p_{ij}} = \alpha_j + x_i \beta_j \dots \dots \dots (i)$$

Where  $\alpha_j$  is a constant and  $\beta_j$  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

**Modeling Probabilities:** Multinomial logit model can 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

$$p_{ij} = \frac{\exp h_{ij}}{\sum_{k=1} \exp h_{ik}} \dots \dots \dots (ii)$$

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:

- X<sub>1</sub> = Gender of house head (1 = Male, 0 = otherwise)
- X<sub>2</sub> = Age of farmer (years)
- X<sub>3</sub> = Marital status of farmer
- X<sub>4</sub> = Educational status of farmer
- X<sub>5</sub> = Religion of farmer
- X<sub>6</sub> = Family size
- X<sub>7</sub> = Income and output (₦ / kg)
- X<sub>8</sub> = Availability of healthcare services (1 = Yes, 0 = otherwise)
- X<sub>9</sub> = Types of healthcare services
- X<sub>10</sub> = Distance to healthcare centre
- X<sub>11</sub> = Mode of financing healthcare services (OOPs= 1, 0 otherwise)
- X<sub>12</sub> = Quality of healthcare services
- X<sub>13</sub> = Frequency of visit
- X<sub>14</sub> = Cost of treatment

**3. Results and discussion**

**3.1 Socioeconomic Characteristics:** The mean age of the farmers interviewed was 40 years old. 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 literacy level of the respondents revealed that majority representing 45.71% of the farmers were able to undergo at most 12 years of schooling; this implies that they must have completed their secondary level of education while 24.29% of the respondents only stopped at the primary school level (six years of schooling). 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. 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.

**3.2 Monthly income and expenditures of the farmers:** Table 2 reveals that 34.28% earned between ₦20,000 and ₦29,999 monthly while 26.43% of the respondents earn between ₦10,000 and ₦19,999 and 20% earn between ₦30,000 and ₦39,999. 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, most of the farmers have 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 is very low compared to that spent on food, therefore the cost of healthcare services for those who are not insured will be a major determinants of healthcare utilization among these farmers

**3.3 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. The utilization of healthcare services for this study is categorized 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 any of the healthcare centers at least once every five month and those who visited any of the healthcare services at most once every three (3) month.

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

4: comprises of the group who visits any of the healthcare centers at least three times every month 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 3 shows that majority of the respondents, 54.02, 45.27 and 63.64 percent 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 centers about twice in a month (biweekly). Also, majority of the respondent utilize government healthcare centers because treatments though of low quality are subsidized by government.

**3.4 The determinants of the utilization of healthcare services:** The result of the determinants of the utilization of healthcare services using the multinomial logit model in table 4 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 determined 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 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 also determined by the cost of treatment (coftrmt), 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. This result which is consistent

with the findings of Mutchler et al (1991) and Bicego et al (1997) for Tanzania, confirms that the distance to healthcare centre and cost of treatment are very important factors influencing the rate of utilization of healthcare services among rural dwellers.

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 (coftrmt) 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 (coftrmt) 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 (coftrmt) will increase the farmer's preference for traditional healthcare services compared to that of government healthcare services.

The determinants of the utilization of a combination of government and private healthcare services include the availability of healthcare services (availofh), type of healthcare services (typehc), distance to healthcare services (disttohc) and the quality of treatment (qtrmt). 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. These results which are consistent with the findings of Akinwumi (2010) and Dike (2010), confirms that the availability of qualitative healthcare services is a major determinant of the utilization of healthcare services among any given group of people

The utilization of the combination of government and traditional healthcare services was influenced 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 (availoh), type of healthcare services (typehc) and distance to healthcare centre (disttohc) are the factors influencing 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 have 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 of 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. This result also confirms the finding of Mekonnen, (1998) that the distance to and availability of healthcare services influence the rate of utilization of healthcare services.

Table 1. Socioeconomic Characteristics of Farmers

	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, 2011

Table 2. Mean Monthly Expenditures of Farmers

Items	Mean	Percentage
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

Table 3. Types and Degree of 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	
	f	%	f	%	f	%	f	%	f	%
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

Table 4. The Determinants of the Utilization of Health Care Services among Farmers in Oyo State.

Variable	Private Healthcare Services		Traditional Healthcare Services		Government & Private Healthcare Services		Government & Traditional Healthcare Services		Government, Private & Traditional Healthcare Services		Self care	
	Estimate	Z	Estimate	Z	Estimate	Z	Estimate	Z	Estimate	Z	Estimate	Z
Gender	2.4243 (0.9984)**	2.43	0.4058 (1.3131)	0.31	1.5258 (1.0822)	1.41	2.5603 (1.3443)*	1.90	75.9509 (1.11e+09)	0.00	3.5601 (1.5695)**	2.27
Age	-0.0356 (0.0359)	-0.99	0.0023 (0.0640)	0.04	-0.0036 (0.0412)	-0.09	0.0170 (0.0453)	0.38	-0.6997 (4.31e+07)	-0.00	-0.0314 (0.0659)	-0.48
Maristat	-0.5752 (0.8869)	-0.65	-1.8113 (1.5558)	-1.16	-0.6792 (1.0760)	-0.63	0.3287 (1.1573)	0.28	59.6127 (1.21e+09)	0.00	-1.8493 (1.4599)	-1.27
Yrschlin	0.0747 (0.0996)	0.75	0.0286 (0.1499)	0.19	-0.1444 (0.1154)	-1.25	-0.1979 (0.1330)	-1.49	-3.7554 (9.98e+07)	-0.00	-0.2655 (0.1672)	-1.59
Disttohc	0.1870 (0.0726)**	2.57	0.1300 (0.1078)	1.21	0.1669 (0.0816)**	2.04	0.2729 (0.0833)***	3.27	3.8211 (5.83e+07)	0.00	0.1826 (0.1047)*	1.74
Fofvisit	0.1431 (0.0953)	1.50	-3.6371 (1.4322)**	-2.54	-0.6552 (0.5696)	-1.15	-0.0161 (0.1623)	-0.10	2.0711 (1.45e+08)	0.00	-0.0785 (0.2522)	-0.31
Coftrmt	-0.0011 (0.0005)**	-2.23	0.0015 (0.0075)**	2.00	0.0006 (0.0007)	0.99	0.0005 (0.0008)	0.69	0.0095 (274097.6)	0.00	-0.0008 (0.0011)	-0.75
Qtrmt	0.5780 (0.7339)	0.79	0.2569 (1.1205)	0.23	1.9581 (1.0423)*	1.88	-1.0630 (1.0920)	-0.97	-39.5210 (1.03e+09)	-0.00	2.1373 (1.4034)	1.52
Availofh	-2.4938 (1.2400)**	-2.01	-4.0573 (1.4544)***	-2.79	-3.6943 (1.4822)**	-2.49	-4.3396 (1.6804)**	-2.58	-73.2023 (1.77e+08)	-0.00	-5.4933 (1.7619)***	-3.12
Typehc	0.7949 (0.2376)***	3.35	1.0634 (0.3737)***	2.85	1.9194 (0.4294)***	4.47	1.7461 (0.4172)***	4.19	12.0071 (6.92e+07)	0.00	1.6146 (0.4373)***	3.69
Finanhc	4.0887 (1.3809)***	2.96	1.2898 (1.3912)	0.93	0.0435 (1.1540)	0.04	1.6441 (1.1292)	1.46	30.5088 (2.54e+08)	0.00	1.8231 (1.6569)	1.10
Religion	-0.7171 (0.5315)	-1.35	1.6520 (0.7256)**	2.28	-0.0875 (0.6228)	-0.14	-1.6242 (0.8408)*	-1.93	-39.7291 (2.76e+08)	-0.00	0.8799 (0.7603)	1.16
Constant	-6.3830 (2.7500)	-2.32	-3.8774 (4.0836)	-0.95	-2.9426 (2.9477)	-1.00	-3.8609 (2.8541)	-1.35	-223.2142 (1.27e+09)	-0.00	0.5490 (4.3078)	0.13

#### 4. Conclusion and Recommendations

The study revealed that method of financing healthcare services 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-medication and traditional healthcare services which is often times not good enough. 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.

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 long distances 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. All these would help increase the accessibility and utilization rate of healthcare services in the study area.

#### References

1. Agbonoga, A.. E. (1998). Towards Effective physical planning of solid mineral resources areas of Nigeria. *NTTP Journal*, Lagos, Nigeria, 11:30 – 42.
2. Ajala O. A., Lekan S. And Adeyinka S.A.. (2005). Accessibility to Healthcare Facilities: A Panacea for Sustainable Rural Development in Osun State Southwestern, Nigeria: *J. Hum. Ecol.*, 18(2): 121-128
3. Akinwumi, F. (2010). The intimidating challenges facing the healthcare sector in Nigeria and solutions”, *Daily Independent* (Lagos) Nigeria.
4. Bicego, G., Sian, C., Hendrik, R., Saidi K and Sylvester, N. (1997). *Adult and Childhood Mortality: In-depth study of Tanzania*, Calverton, Maryland, Macro International Inc.
5. Dike, V. E. (2010). Governance and Challenges facing the Nigerian Economy: Is Jonathan the Answer? [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1646202](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1646202), Retrieved in 10 March 2012.
6. Lucas, A..O and Gilles, H. M. (2004). *Short Textbook of Public Health Medicine for the Tropics*. 4<sup>th</sup> Edition Book Power, CRC Press. ISBN: 0-340-81645-7
7. Mekonnen, Y and Asnaketch M. (2002). *Utilization of Maternal Health Care Services in Ethiopia*. Calverton, Maryland, USA: ORC Macro.
8. Mutchler, J. E. and Burr, J. A.. (1991). Racial Differences in health and healthcare service

Utilization in later life: The effect of socioeconomic status, *Journal of Health and Social Behaviour*, 32: 342-356

9. Nigerian Population Commission. (2006). *Nigerian Demographic Health Survey* Abuja, Nigeria.

10. Okafor, F.C. and Onokerhoraye, A.. G. C. (1980). *Rural System Planning Geography and Planning Series*. University of Benin, Benin, Nigeria

*www.ijasrt.com*