

Effect of Distance on Utilization of Health Care Services in Rural Kogi State, Nigeria

T. T. Awoyemi¹, O. A. Obayelu¹ and H. I. Opaluwa²

¹*Department of Agricultural Economics, University of Ibadan, Ibadan, Nigeria*

E-mail: ttawoyemi@yahoo.com, jkemmyade@yahoo.co.uk

²*Department of Agricultural Economics and Extension, Kogi State University, Nigeria*

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ABSTRACT Adequate and equitable distribution of health care facilities in rural areas is critical to human capital development. The study determined factors influencing utilization of health facilities in rural Kogi state, Nigeria. The data for the study were collected from 160 rural households and 60 health care providers from randomly selected rural areas from the four agricultural zones in Kogi state. The indices of accessibility reveal that there is unequal access to modern health facilities in the study area. The multinomial logit was used to analyze the factors influencing the utilization of health facilities in the study area. The result reveals that household size, distance and total cost of seeking health care affect the utilization of government and private hospitals while total cost of seeking health care and the quality of access route affect the use of traditional care. The policy implication arising from this study suggests that distance to improved health facilities and the total cost of seeking health care need to be reduced to enhance accessibility to improved health services by various socio-economic groups in the area.

INTRODUCTION

Health is a major form of human capital and there exists substantial agreement in the literature on the relationship between health and economic development through its relationship between capability and poverty (Strauss and Thomas 1998). It is assumed that improvement in health leads to improvement in life expectancy, which is a robust indicator of human development. A simple channel through which health affects human development is by improving living conditions. As living conditions improve, human longevity is expected to improve and vice-versa. Empirical evidence has shown that among poor countries, increase in life expectancy is strongly correlated with increase in productivity and income (Deaton 2003)

Health care utilisation is the use of health care services by people. The health care utilisation of a population is related to the availability, quality and cost of services, as well as to social-economic structure, and personal characteristics of the users (Chakraborty et al. 2003; Manzoor et al. 2009; Onah et al. 2009). The under-utilisation of the health services in public sector has been almost a universal phenomenon in developing countries (Zwi 2001). It is, therefore, in recognition of this fact that various Nigerian governments have made numerous great efforts towards the provision of health care facilities to its population. Notable among these efforts were the expansion of medical education, improvement of

public health care, provision of primary health care (PHC) in many rural areas. However, overt concern has not been given to the need for equity in the planning and distribution of health care facilities over the years in the country. Public and private health care facilities are sparsely provided in many regions within the country. Such regions with difficult terrain and physical environment are often neglected (Onokerhoraye 1999). This makes the distance between the rural dwellers and the health care center far apart, given the transportation problem experience in these areas, and its attendant cost.

Longer travel times and greater distances to health centers in rural areas constituted barriers to repeated visits. Buor (2003) found that distance is the most important factor that influences the utilization of health services in the Ahafo-Ano south district of Ghana. The effect of travel time on utilization reflects that of distance and utilization. The inadequacies in the access to health facilities have reduced the life expectancy of rural inhabitant and increased infant mortality (Ajala et al. 2005). They further asserted that rural people often waste a lot of time getting to the nearest available health care center of which they have to trek long distance on many occasion because they are often faced with the problem of reliable means of transportation.

In Guatemala, Goldman and Heuveline (2000) found that family size and parity, educational status and occupation of the head of the family are also associated with health seeking behaviour

besides age, gender and marital status. Mugsha et al. (2004) identified household income, education, and expected competency of the provider as positive determinants of utilization of health care services in rural Burkina Faso. Buor (2005) identified the determinants of utilization of health services by women in rural and urban areas in Ghana using multiple regression posited that income and family size affect the rural areas in Ghana during utilization while education and marital status affect those in urban areas. The influence of education on use of health service has also been examined. Generally education, income and health seem to have positive relationship with utilization of modern health care facilities. In other words, people with higher educational attainment stand to benefit better income and invariably could afford payment for quality health care.

Babar et al. (2004) in a study on health seeking behaviour and health service utilization in Pakistan asserted that the factors determining the health behaviours may be seen in various contexts: physical, socio-economic, cultural and political. Therefore, he concluded that the utilization of a health care system, public or private, formal or non-formal, may depend on socio-demographic factors, social structures, level of education, cultural beliefs and practices, gender discrimination, status of women, economic and political systems environmental conditions, and the disease pattern and health care system itself.

In a study in south-east Nigeria, Uzochukwu and Onwujekwe (2004) found that the private health facilities were the initial choice of health care for the majority with a decline among those choosing them as a second source of care and an increase in the utilization of public health facilities as a second choice of care. Self diagnosis was practiced more by the poorer households while the least poor used the patent medicine dealers and community health workers less often for diagnosis of malaria. In Haiti, Alexandre et al. (2005) in a study of antenatal care utilization in rural areas and urban areas, used logistic models to identify which factors explained the decision to seek prenatal care, and negative binomial models to determine how many prenatal visits were conducted by the subgroup of women who did make prenatal care visits. They found out that a substantial percentage of pregnant women have access to prenatal care services in Haiti, but mothers in rural areas who decided to seek care still fell slightly below the

four visits recommended by the World Health Organization. The education levels of both mothers and their partners are a dominant predictor of prenatal care use.

All these studies show that utilization of health care facilities is influenced by physical, socio-economic, psychological as well as organizational factors. But accessibility is not considered for its sake. It is generally examined in relation to the pattern of distribution of the service supplying unit and the user population. The usual goal is to see whether the pattern of distribution is beneficial to the people or not. In other words, the distribution meets the criteria of either efficiency or equity. Accessibility to health care facilities has been studied and discovered to be a very crucial determinant in the location and utilization of health facilities, given the nature of its consumption. In a study on distributive effects of location of government hospitals in Ibadan, Okafor (1991), using the index of access opportunity (AO) mode, revealed that the areas which are mostly accessible lie to the north and largely outside of the inner part of the city. These areas included some high, middle and lower income class districts. Using multiple regression models, he found out that the pattern of distribution of government hospital was in fact, not regressive. Ajala et al. (2005) using the same index of accessibility model in a study titled accessibility to health care facilities; a panacea for sustainable rural development in Osun state revealed that the available health facilities are grossly inadequate and their distribution depicts serious inequality and he therefore suggested that there is an urgent need for serious intervention on the part of government in the provision of health facilities in the state focus at equitable distribution and accessibility to enhance sustainable rural development.

There are three main health providers in Nigeria. These are: government or public health service provider, private health care provider and non-governmental health care providers which are coordinated by the ministry of health. The underutilization of these health facilities in rural area which are occasioned by inaccessibility has led to deaths from illness which ordinarily could be treated and prolonged state of illness thus reducing labour productivity from the area. Ajala et al. (2005) asserted that the resultant effect of inadequate access to health care delivery, on sustainable development can be exemplified by

the number of man hour loss annually to malaria alone, which culminate into lower productivity by workers. Based on this, the study is set out to address the following questions: What is the level of accessibility to health care facilities by the rural households? What are the determinants of health care utilization in the study area?

METHODOLOGY

The Study Area

This study will be carried out in rural areas of Kogi state in north-central geopolitical zone of Nigeria. The state is located between latitude 7°48'N and longitude 6°43'E and sharing boundaries with Kwara, Ondo, Ekiti, Niger, Benue, Nassarawa, Anambra, Enugu, Edo states as well as the Federal, Capital Territory. The total land area of the state is 28,313,535 Km². Kogi state has a population of about 3,278,487 people (NPC 2006), with an average of 172,000 farm families. About seventy percent of this population lives in rural areas (KSADP 1995). For agricultural control and administration, Kogi is divided into four agricultural development zones, namely: Zone A which comprises of Ijumu, Kabba/Bunu, Yagba-East, Yagba-West Local Governments with zonal headquarters in Aiyetoro-gbede. Zone B, comprises Dekina, Bassa, Ankpa, Olamaboro, and Omala Local Governments, with zonal headquarters in Anyigba. Zone C comprises Adavi, Ajaokuta, Koton-Karfe, Kogi, Okene and Okehi Local Governments with zonal headquarters in Koton-Karfe. Zone D, comprises of Idah, Ofu, Ibaji and Igala-Mela Local Governments with zonal headquarters in Aloma.

Sampling Procedure and Data collection

A multi-stage random sampling technique was employed. The first stage involved the selection of all the four Agricultural Development Program (ADP) zones; A,B,C,D zones. An LGA represent a Block while the villages are the cells. The second stage was the random selection of one Block (LGA) from each zone. The selected Blocks were: Idah, Okehi, Yagba-East and Dekina. The third stage was the random selection of 3 cells (villages) each from each of the randomly selected Blocks (LGA) amounting to 12 cells across the zones. At the fourth stage, 15 households were randomly selected from each of the selected cells,

summing up to a total of 180 households. Five (5) healthcare providers were also selected from each of the selected cells in the chosen Blocks amounting to 15 healthcare providers per Block and 60 across the zones. Two sets of questionnaires were used. The first set was administered to rural households while the second was to the healthcare providers themselves. A total of 180 questionnaires were administered to households while a total of 60 were administered to healthcare providers. A total of 160 household-based questionnaires which gave consistent reports were used for analyses. However, all the 60 questionnaires collected from the health care providers were used for analyses.

Method of Data Analysis

The analytical procedure for this study involved the use of the descriptive statistics, index of accessibility and the multinomial logit regression. Descriptive statistics such as frequencies, means, percentages and standard deviation were used to describe the level of utilization of health care services and the effect of distance on the utilization of health facilities and the level of utilization of health facilities in the study area.

Four indices of accessibilities (IAs) were computed. These are number of patient per medical officer (I.A₁); number of patient per nurse (I.A₂); number of patient per community health workers (I.A₃); and number of patient per hospital bed space (I.A₄). These indices are expressed as:

$$I.A_1 = \frac{N_p}{N_d} \dots \dots \dots (1)$$

Where I.A₁ = index of accessibility for number of patient per doctor

N_p = number of patients

N_d = number of doctors

$$I.A_2 = \frac{N_p}{N_s} \dots \dots \dots (2)$$

I.A₂ = index of accessibility for number of patient per nurse

N_p = number of patients

N_s = Number of nurses

$$I.A_3 = \frac{N_p}{N_c} \dots \dots \dots (3)$$

I.A₃ = index of accessibility for number of patient per community health worker

N_p = number of patients

N_c = number of community health workers

$$I.A_4 = \frac{N_p}{N_b} \dots \dots \dots (4)$$

N_b

$I.A_{4=}$ index of accessibility for number of patient per hospital bed

N_p = number of patients

N_b = number of hospital beds

The multinomial logit regression model was used to analyze factors affecting the choice of healthcare alternative. This model is based on the random utility model. The model posits that the utility (u) a household derives from utilizing a particular health provider is a linear function of at least two sets of explanatory variables: (i) source attributes which affect household's utility; and (ii) household's health status and socio-economic characteristics, such as proximity and quality which affect differences in taste and preferences among households (X).

$$U(\text{alternative } 0) = \beta_j X_0 + e_j$$

$$U(\text{alternative } 1) = \beta_j X_0 + e_j$$

$$U(\text{alternative } j) = \beta_j X_0 + e_k$$

Suppose the observed outcome (dependent variable) = choice j . If $U(\text{alternative } j) > U(\text{alternative } k)$ " $j=k$, then

$$\beta_j X_j + e_j > \beta_k X_k + e_k$$

The probability of choosing an alternative is equal to the probability that the utility of that particular alternative is greater than or equal to the utilities of all other alternatives in the choice set.

The dependent variable is a discrete variable taking values 0, 1, 2 and 3 are the cases of choice of a particular healthcare providers these are self care, government hospitals, private hospitals, traditional care, respectively. The independent variables include:

Age (in years), Gender (1 = if male headed household, 0 if otherwise), Edustatu (Educational status in years), hhsz (Household size), occupati (Primary occupation of household head: 1= farming, 0 if otherwise), totalinc (Total income in ₦), disotrea (Distance of available hospital from home in Km), totcossh (Total cost of seeking treatment in ₦), tptime (Time spent to access health care in hrs), quofacro (Quality of access route: 1= good, 0 if otherwise).

RESULTS AND DISCUSSION

Summary Statistics of Rural Households

The average and modal years of farming experience was 23.11years and 30years respectively. This shows that a typical rural household head has been farming from his youth and can conveniently choose the type of health care

facilities that maximizes his or her utility. Also, a typical rural household is relatively large (8 ± 3) with an average per capita expenditure of ₦1,846.98 $\pm$ 347.19 (Table 1). Large family sizes and low standard of living might limit the rural households from using modern healthcare facilities. Distance is also likely to have a negative influence on utilization of modern health care facilities. The average distance and cost of transportation to a nearest modern health facility (public or private hospital) in the rural area are 8.33 ± 4.51 km and ₦ 395.69 $\pm$ 347.19 respectively. This suggests an insufficient distribution of public health facilities in the rural area of Kogi state. Thus, rural households might not want to utilize modern healthcare facilities due to the long distances to health centres, long transportation period and high cost of transportation to health centres.

Table 1: Summary statistics of household characteristics

Household characteristics	Mean	Mode	Standard deviation
Age (years)	44.8	45	10.1
Farming experience (years)	23.1	30	10.2
Household size	7.8	6	2.7
Years of formal education (years)	5.3	0	6.3
Mean per capita expenditure (₦)	1847	1416	966.4
Distance of health centre from home (km)	8.3km	5km	4.5km
Cost of transportation to health care centre (₦)	395.7	0	347.2
Frequency of visit to health care centre in a year	5	6	2
Duration of transportation (hrs)	0.9	1	0.8

Socio-economic Characteristics of Rural Households

The result reveals that the average age of the rural household heads is 44.78 ± 10 years while the modal age is 45years (Table 1). This implies that a typical rural household head is in his or her economical active years. Age is expected to be positively related to utilization of health facilities (Dias et al. 2008). However, majority of household heads in their active and economic age seek health care from government hospitals with a few of them utilizing self care and traditional care

Table 2: Age and utilization of health facilities

Age (years)	Place of treatment									
	Government hospital		Private hospitals		Self medication		Traditional care		Total	
	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
20-30	13	68.4	2	10.5	2	10.5	2	10.5	19	100.0
31-40	13	34.2	5	13.2	9	23.7	11	28.9	38	100.0
41-50	15	24.6	2	3.3	11	18.0	33	54.1	61	100.0
51-60	10	30.3	3	9.1	10	30.3	10	30.3	33	100.0
>60	3	33.3	2	22.2	2	22.2	2	22.2	9	100.0
Total	54	33.8	14	8.8	34	21.3	58	36.3	160	100.0

(Table 2). Private hospitals are least utilized across the various age groups probably because of the high cost associated with their services since private health providers are out to maximize profit. The results further show that a higher proportion of the household heads within the age brackets of 20 – 30 years (68.4 percent) and 31 – 40 years (34.2 percent) utilize government hospitals while those in age group of 41 – 50 years (54.1 percent) seek healthcare from traditional sources. However, self-medication and traditional care are mostly utilized among household heads above 50 years of age. The result therefore contrasts the findings of Dias et al. (2008) that utilization of orthodox health care facilities is positively influenced by age.

The highest proportion of male-headed households (38.0 percent) utilizes traditional health care facilities while 38.9 percent of female-headed households use self medication (Table 3). However, a higher proportion of male-headed households (34.5 percent) seek modern health care services than female-headed households (24.8 percent). This implies that the level of utilization of modern health facilities is lower among female-headed households than among their male counterparts. This is consistent with the findings of Dias et al. (2008). This might be as a result of low level of access to productive assets among rural female-headed households.

The result shows that while utilization of modern health facilities decreases with household

size, utilization of traditional health care facilities increases with household size (Table 4). About half of the households with 0 – 4 members utilize government hospitals while 75 percent of households with more than 14 members do not utilize modern health care facilities. The result further shows that private hospitals are least utilized in the rural area probably because of high cost of consultation. It can be clearly deduced that larger households may not be able to afford modern health facilities and thus turn to the utilization of self-medication and traditional health care services, which they consider relatively cheaper as a larger share of household expenditure will be spent on food.

Education has an important impact on utilization of health care facilities. The result in Table 5 shows that the highest proportion (25 percent) of the rural household heads has primary education. The result shows that a larger percentage (56.5 percent) of households whose heads have tertiary education utilize modern health care facilities while a higher percentage (57.9 percent) of households whose heads do not have access to formal education do not utilize modern healthcare facilities. Also, 60 percent of households whose heads have adult literacy education do not utilize modern healthcare facilities. The result follows the findings of Mekonnen and Mekonnen (2002), that utilization of modern health care facilities increases with educational attainment.

Table 3: Distribution of gender and utilization of health facilities

Gender	Place of treatment									
	Government hospital		Private hospitals		Self care		Traditional care		Total	
	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
Male	49	34.5	12	8.5	27	19.0	54	38.0	142	100.0
Female	5	27.8	2	11.1	7	38.9	4	22.2	18	100.0
Total	54	33.8	14	8.8	34	21.3	58	36.3	160	100.0

Table 4: Distribution of household size and utilization of health facilities

Household size	Place of treatment									
	Government hospital		Private hospitals		Self care		Traditional care		Total	
	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
0-4	2	50.0	-	-	1	25.0	1	25.0	4	100.0
5-9	39	33.1	13	11.0	25	21.2	41	34.7	118	100.0
10-14	12	35.3	1	2.9	6	17.6	15	44.1	34	100.0
>14	1	25.0	-	-	2	50.0	1	25.0	4	100.0
Total	54	33.8	14	8.8	34	21.3	58	36.3	160	100.0

Effect of Distance on the Utilization of Health Facilities

Distance to provider is a surrogate for location in a richer web of relations between residents and their local communities (Nemet 2009). Table 6 shows that only 18 percent of the rural households live close (0-4km) from a public health centre. Majority (62.1 percent) of the rural households seek healthcare services from government hospital while a higher proportion (42.1 percent) of rural households living within 15-19km away from the traditional health centres. The result, therefore, indicates that utilization of available public health facilities increases with proximity to the health centres.

Thus, rural households utilize self-medication and traditional care closer to their residence. This is expected to reduce their cost of transportation and rigour of accessibility to distant modern health care services.

Accessibility to Modern Health Care

Accessibility of health services has been shown to be an important determinant of utilization of health services in developing countries (Mekonnen and Mekonnen 2002). The result of the indices of Accessibility to Public Health care facilities show that there is an average of 111, 20, 61 and 6 patients to a doctor, a nurse, a community health worker and a hospital bed respec-

Table 5: Educational status and utilization of health facilities

Educational status	Place of treatment									
	Government hospital		Private hospitals		Self care		Traditional care		Total	
	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
No formal education	25	32.9	7	9.2	15	19.7	29	38.2	76	100.0
Adult Education	2	40.0	-	-	2	40.0	1	20.0	5	100.0
Primary Education	10	25.0	3	7.5	10	25.0	17	42.4	40	100.0
Secondary Education	6	37.5	2	12.5	4	25.0	4	25.0	16	100.0
Tertiary Education	11	47.8	2	8.7	3	13.0	7	30.4	23	100.0
Total	54	33.8	14	8.8	34	21.3	58	36.3	160	100.0

Table 6: Distance of health care centre from home

Distance of hospital from home (km)	Place of treatment									
	Government hospital		Private hospitals		Self care		Traditional care		Total	
	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
0-4	18	62.1	7	24.1	-	-	4	13.8	29	100.0
5-9	15	21.1	6	8.5	18	25.4	32	45.1	71	100.0
10-14	15	36.6	6	2.4	11	26.8	14	34.1	46	100.0
>14	6	31.6	-	-	5	26.3	8	42.1	19	100.0
Total	54	33.8	14	8.8	34	21.3	58	36.3	160	100.0

tively (Table 7). This suggests that there is inadequate supply of health workers in the rural public health centres. This might reduce the level of utilization of such centres due to much time spent in accessing health care. The result further shows that there is inadequate supply of public health care facilities (both human and infrastructural) in rural Kogi state. Furthermore, there is unequal access to modern healthcare by the respondents in the study area. The patient ratio per health personnel goes a long way to determine the workload of the personnel and their efficiencies on the job. The number of patients to attend to per health personnel determine the waiting time of the patient, thereby measure the accessibility of patient to medical facilities. The lower the number of patients per health personnel, the better the accessibility of health care facilities. Bhattia and Cleland (2001) in their study have noted that the high use of private health care is due to easy access, shorter waiting time, longer or flexible opening hours, better availability of staff and drugs, and better attitude of staff.

Determinants of Utilization of Rural Health Care Facilities

The result show that household size ($p < 0.10$), distance of available hospital from home ($p < 0.01$) and the total cost of seeking health service ($p < 0.01$) have inverse relationship with the utilization of government hospitals (Table 8). This implies that an increase in household size leads to a decrease in the utilization of government hospital and the rural dwellers will show a prefer-

Table 7: Indices of accessibility to health care facilities

Local Government Areas (LGA)	Indices of accessibility			
	Patient per doctor	Patient per nurse	Patient per community health worker	Patient per hospital beds
Idah	87	16	52	5
Okehi	172	20	172	7
Yagba East	115	18	12	7
Dekina	69	25	6	5
Pooled	111	20	61	6

ence for self medication treatment. This is because larger households would spend more of the available household income on the food needs of the family. This makes the choice of government hospital a luxury for such households. Similarly, the farther the distance of available government health center from home, the less preference the respondents will show for seeking treatment from government hospitals and the more preference they will show for seeking self-care treatment. Also, the higher the total cost of seeking healthcare from government hospitals the more the respondents will show preferences for self-care treatment than government hospitals. The cost of orthodox health care is increasingly becoming a barrier to many health care seekers, making them seek alternative providers. Drug peddlers and drug store operators provide services, which are closer to the people and may be cheaper in the short run than services from regular health care providers because

Table 8: Factors influencing utilization of rural health care facilities

Variables	Government hospitals			Private hospitals			Traditional care		
	Estimate	SE	Z	Estimate	SE	Z	Estimate	SE	Z
Age	-0.00	0.06	-0.07	0.01	0.07	0.16	-0.01	0.035	-0.36
Gender	0.82	1.65	0.49	0.59	1.801	0.33	1.36*	0.830	1.63
Edustatu	0.15	0.11	1.35	0.10	0.12	0.81	0.03	0.06	0.49
Hhsize	-0.30*	0.17	-1.84	-0.40*	0.23	-1.74	0.18	0.12	1.51
Occupati	-0.01	1.33	-0.00	-0.45	1.47	-0.31	0.47	0.75	0.62
Totalinc	0.00	0.00	1.50	0.00	0.00	1.04	0.00	0.00	0.41
Disotrea	-0.94***	0.26	-3.68	-1.12***	0.28	-3.94	0.02	0.07	0.22
Totcossh	-0.01***	0.00	3.90	-0.01***	0.00	3.79	-0.00***	0.00	-3.66
Tptime	-0.90	0.71	-0.13	-1.61	1.06	-1.52	0.69*	0.04	1.64
Quofacro	-3.26	2.71	-1.20	-2.64	2.84	-0.93	2.02*	1.13	1.79
Cons	-0.95	3.31	-0.29	0.52	3.72	0.14	-0.49	1.88	-0.26

Log likelihood = -90.2

Log-likelihood ratio chi-square (D.F, 30) = 228.24

Prob > chi square = 0.0000

Pseudo R² = 0.5587

Self-Medication = Base,

N = 160

*** Significant at 1percent, ** Significant at 5percent and * Significant at 10percent

of non-payment of consultation fees and transport expenses (Asenso-Okyere et al. 1998).

The utilization of private hospital was affected by the household size ($p < 0.10$), the distance of available hospital from home ($p < 0.01$) and the total cost of seeking health service ($p < 0.01$). The household size has an inverse relationship with the utilization of private hospitals, this implies that the larger the household size, the less the likelihood of utilization of private hospitals and the more the respondents will show preference for self care treatment. Distance of available hospital from home also has an inverse relationship with the utilization of private hospitals. This reveals that the more the distance of available hospital from home, the less the utilization of private hospitals and the more the rural dwellers will show preference for self-medication treatment. In addition, the total cost of seeking health service shows an inverse relationship with the utilization of private hospitals. This implies that the more the total cost of seeking private hospitals, the less preference the rural households will show for seeking health service from private hospitals than for self-care medication.

Factors affecting the utilization of traditional care treatment were the total cost of seeking health service ($p < 0.01$) and the quality of access road ($p < 0.10$). The total cost of seeking health service shows an inverse relationship with the utilization of traditional care treatment. This that an increase in the total cost of seeking traditional will lead to a decrease in the utilization of traditional health care services and the respondents will show greater preference for self care treatment. However, the quality of access roads shows a direct relationship with the utilization of traditional care treatment. This suggests that improved rural infrastructure facilitates preference for traditional health centres to self-medication

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improved rural infrastructure facilitates preference for traditional health centres to self-medication

CONCLUSION

This study has shown that there is unequal distribution of health facilities as well as low level of accessibility of patient to medical facilities in the study area. To this end, the state and local governments in Kogi state should also ensure equitable accessibility to health care delivery across the rural areas in the state by deploying more medical and para-medical staff to these places. In order to overcome the barrier of distance to their utilization of health care services, there should be establishment of public health centers in the core rural areas. This will increase the proximity and accessibility of rural people to public health facilities. The government should also embark on several health programmes and birth control campaign to educate the people on the benefit of utilizing improved health facilities.

The government should also encourage public-private participation in health care delivery at a price affordable by the rural people. This could be achieved through the provision of basic infrastructure such as accessible roads, electricity, water, drugs et cetera.

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