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Significant Factors Affecting Patronage of Health Facilities by Rural Dwellers in Owo Region, Nigeria

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Abstract: Infrastructure has become ubiquitous theme in a variety of areas of the policy debate. For instance, a number of studies have argued that generalized access to infrastructure services plays a key role in helping to reduce income inequality and enhancing productivity. Health care facility is one of these infrastructure. Paradoxically, the inadequate provision of infrastructure is more pronounced in the rural areas that habour greater proportion of the Nigerian population than the urban area. While frantic efforts are being made in providing for more infrastructure, it is therefore necessary to encourage adequate patronage of the available infrastructure particularly health facilities by the rural dwellers. This study reports the findings of a study that looked into the significant factors affecting the patronage of health care facilities by rural dwellers in Owo region, Nigeria. The study utilized a set of questionnaire designed to collect data on the health-seeking behaviour of 348 rural dwellers randomly selected from 22 rural settlements in the region. The study identified 20 health consumer variables that were fitted into regression model. Using a step-wise regression model, it concludes that only nine (9) of the 20 variables significantly affected the patronage of health care facilities by the rural dwellers in the region. Finally, the paper gives suggestions that would enhance these factors in the promotion of patronage of health care facilities in the region in particular and Nigeria in general which are adaptable to most developing countries of the World.

Key words: Infrasturcture, productivity, health care, rural dwellers

INTRODUCTION

It has long been recognized that an adequate supply of infrastructure services is an essential ingredient for productivity and growth[1]. Health care service is one of these infrastructure services. In drawing out relationship between health and productivity, a major contributor to development, it would seem obvious that a healthier labour force would experience less debility, disability and work more effectively and steadily resulting in increased productivity and rising per capital income[2]. Disappointedly, Aregbeyen[3] was of the opinion that most developing countries that are yearning for increase in productivity and growth lack these infrastructure services and Nigeria is one of such countries.

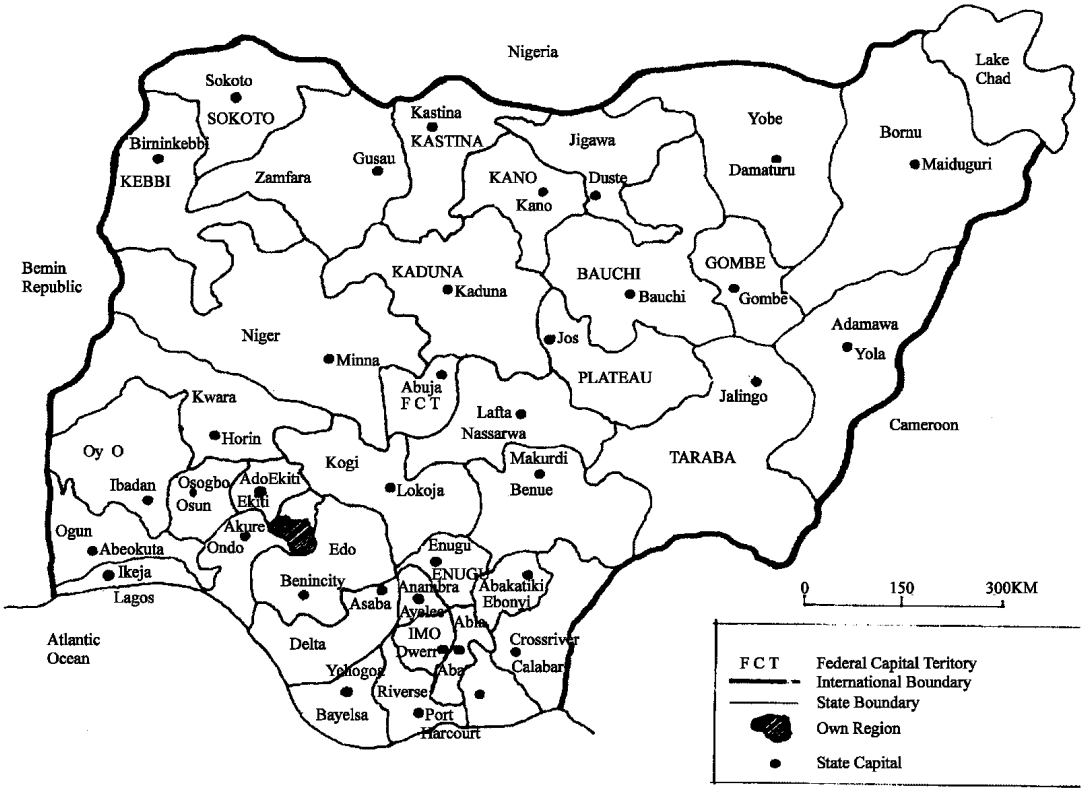
The polarisation of Nigerian society into large rural sector and smaller urban component provides basis for the inadequate provision of infrastructure[4]. For instance, Okunade[5] drew the attention of the policy-makers to the concentration of health facilities and wealth as powerful determinant of standard of living in the urban areas. Unfortunately, over 65% of Nigerian population that live in the rural areas are most neglected and deprived with respect to the provision of modern health care services. Different reasons had been adduced for this neglect.

However, it is strongly believed that scanty population of the rural settlements cannot support the location of health care facility in every settlement. Besides that, the limited financial resources of the government cannot support its establishment in all the rural settlements. Few of the questions that are bordering the minds of the generality is that in spite of the inadequate provision of these health care facilities, are the rural dwellers patronizing the few available health care facilities in their rural communities? What about the available health care facilities in their surrounding urban areas?

Even when the rural dwellers need the health care services for their well-being, it is equally important that the health care facilities should be patronized to promote the sustenance of the health care services. It is on this premise that this study reports the findings of a study that searched into the significant factors affecting the patronage of health care facilities by rural dwellers in Owo region, Nigeria; with a view to enhance the health status of the rural dwellers by encouraging patronage of the available health care facilities within and outside their rural communities.

THE STUDY AREA: OWO REGION, NIGERIA

Owo region comprises of Owo and Ose Local Government Areas (LGAs), which are adjacent to one another in Ondo State, Nigeria (Fig. 1).



Source: Ministry of lands and housing, Akure, 2000.

Fig. 1: Map of Nigeria showing owo region at national setting

Geographically, Woo region is located between longitude 5° 25' and 5° 57' East of Greenwich meridian and between latitude 6° 40' and 7° 38' North of equator. It occupies about 2,516 square kilometers of land. Owo region comprises of 195 settlements, with a projected population of 312,768 for the year 2003.

In the region, there are only 2 urban settlements. These are Owo town and Ifon. The remaining 193 settlements are rural settlements. Therefore over 60% of the populations of the region are rural dwellers. The health facilities in the region are shown in Table 1 and Fig. 2 and these reveal the spatial distribution of health facilities in the region. The aggregate analysis of these health care facilities in essence shows the overall available services to the generality of the people without the consideration of costs and accessibility to such facilities.

Owo with an estimated population of 97,928 harbors the Federal Medical Centre (FMC), 28 private hospitals and medical clinics (including the Catholic Mission Hospital), 3 health centres located at Oke-Mapo, Ijebu and Idasen quarters respectively; a dispensary, a maternity centre; and 3 market-based clinics located at Woo local government council secretariat complex, Ojomo market and Oja Oba respectively. Overall, there are 37 health facilities located in Owo town and they constitute 41.1% of total health facilities in the region.

Ifon, the Ose local government council headquarter is the second most populated settlement in Owo region. It is an urban centre with an estimated population of 20,279. It has 5 private hospitals and clinics and 2 health centres that constitute 7.8% of the entire health facilities in the region. Ipele with an estimated population 7,853 has 4 different health facilities. These are one private hospital, one health centre, one dispensary and one maternity centre. These constitute 4.1% of the health facilities in the entire Owo region. Ipele is located at about 5 km away from Woo, which can be described as a sub-urban settlement[6]. The only available government-owned general hospital is located at Idoani. Idoani has an estimated population Figure of 14,293; which is the headquarters of the defunct Ire-Akari Autonomous Council. Other health facilities in the village include one health centre and a private hospital.The 3 health facilities constitute 3.3% of the entire health facilities in the region. Other settlements that are provided with 2 health facilities include Uso, Ijagba, Iyere, Ikaro, Emure-Ile and Afo. The 2 health facilities are usually a health centre and a private

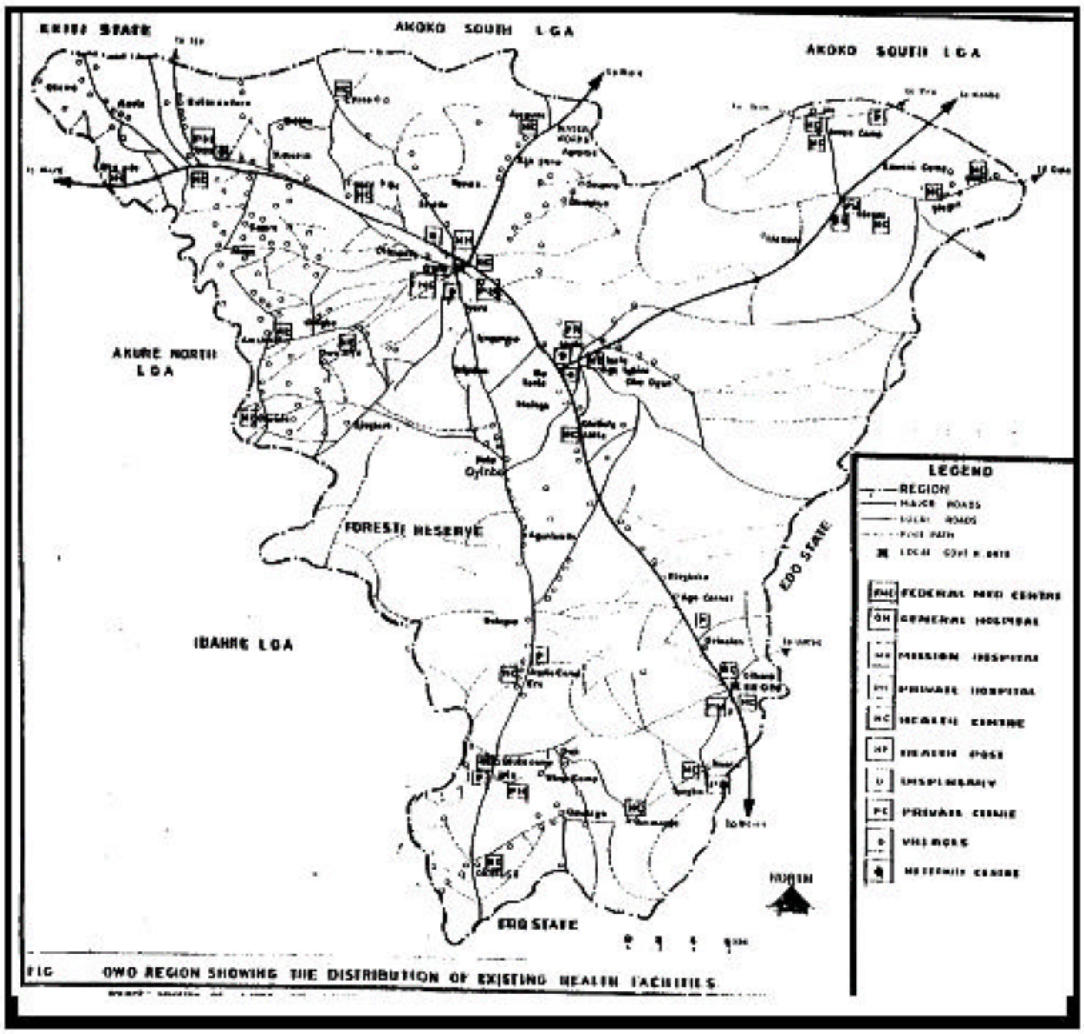


Fig. 2: Owo region showing the distribution of existing health facilities

hospital which in most cases is an annex to an urban-based hospital either at Akure, the state capital or Owo town.

However, 24 other villages are provided with only one health facility each. The villages are Idogun, Okeluse, Isuada, Arimogija, Afo Iwoye, Imoru, Upeme, Imeri Owan, Obasoto, Ojana, Eporo, Amurin, Amehinti, Okiiti Ofa, Ugbegun and Oke-Odo Kajola which are provided with health centre. Other villages that are provided with health post are Agopanu, Water-works, Asolo, Omolege, Oriohin and Igbowoye. Health post is usally a one-room apartment, used as meeting place for immunization exercise during National Immunization Programme[7]. The villagers from the village in an health post is located and the surrounding villages are expected to assemble at the health post for immunization.

In spite of the seemingly impressive number of health institutions in Owo region as shown in Table 1, it is interesting to observe that the two urban settlements in the region (i.e.Owo town and Ifon) put together harbour about 50 percent of the entire health institutions in the region. Even the quality of services in the health institutions located at the villages leave much to be desired.

Considering this spatial injustices that exist in the provision of health care facilities in Owo region, the bordering question is that how can the patronage of the health care facilities by the rural dwellers be improved in Owo region? This is without prejudice to the location of the health care facilities (be it at urban or rural settlements) within the region.

Table 1: Spatial distribution of health facilities in owo region

S/N	Settlements	Proj. Pop 2000	FMC	Gen. Hosp.	Private Hosp.	Health centre	Disp.	Mat.	Mkt. clinic	Health Post	Total	%
1	Owo	97,928	1	-	28	3	1	1	3	-	37	41.1
2	Ifon	20,279	-	-	5	2	-	-	-	-	7	7.8
3	Idoani	14,293	-	1	1	1	-	-	-	-	3	3.3
4	Uso	6,438	-	-	-	1	-	1	-	-	2	2.2
5	Idogun	8,541	-	-	-	1	-	-	-	-	1	1.1
6	Ute	4,729	-	-	2	1	-	-	-	-	3	3.3
7	Ipele	7,853	-	-	1	1	1	1	-	-	4	4.1
8	Ijagba	5,079	-	-	1	1	-	-	-	-	2	2.2
9	Iyere	9,0.16	-	-	1	1	-	-	-	-	2	2.2
10	Okelusi	6,426	-	-	-	1	-	-	-	-	1	1.1
11	Isuada	751	-	-	-	1	-	-	-	-	1	1.1
12	Arimogija	3,178	-	-	-	1	-	-	-	-	1	1.1
13	Afo iyoye	1,789	-	-	-	1	-	-	-	-	1	1.1
14	Afo	3,115	-	-	1	1	-	-	-	-	1	2.2
15	Imoru	3,850	-	-	-	1	-	-	-	-	1	1.1
16	Ikaro	3,063	-	-	1	1	-	-	-	-	2	1.1
17	Upeme	489	-	--	-	1	-	-	-	-	1	1.1
18	Imeri	2,554	-	-	-	1	-	-	-	-	1	1.1
19	Owani	1,884	-	-	-	1	-	-	-	-	1	1.1
20	Emure Ile	4,508	-	-	1	1	-	-	-	-	2	2.2
21	Obasoto	369	-	-	-	1	-	-	-	-	1	1.1
22	Ojana	398	-	-	-	1	-	-	-	-	1	1.1
23	Eporo	569	-	-	-	1	-	-	-	-	1	1.1
24	Amurin	1,349	-	-	-	1	-	-	-	--	1	1.1
25	Amehinti	674	-	-	-	1	-	-	-	-	1	1.1
26	Okoti-Ofa	1,106	-	-	-	1	-	-	-	-	1	1.1
27	Ijbogun	175	-	-	-	1	-	-	-	-	1	1.1
28	Ago panun	1,353	-	-	-	-	-	-	-	1	1	1.1
29	Kajola	1,046	-	-	-	1	-	-	-	-	1	1.1
30	Waterworks	1,011	-	-	-	-	-	-	-	1	1	1.1
31	Asolo	715	-	-	-	-	-	-	-	1	1	1.1
32	Omolege	555	-	-	-	-	-	-	-	1	1	1.1
33	Owajulaye	1,235	-	-	-	1	-	-	-	-	1	1.1
34	Ori-Ohin	1,929	-	-	-	-	-	-	-	1	1	1.1
35	Igbowoye	1,789	-	-	-	-	-	-	-	1	1	1.1
	Total		1	1	42	32	2	3	3	6	90	100

Source: Field survey, 2003

MATERIALS AND METHODS

Primary data were collected from the rural household-heads through the use of questionnaire designed to elicit information from health consumers among the rural dwellers. Using a classification interval of 2,499; the projected population figures for each of the 193 rural settlements were classified into 9 groups. In each of the groups, 10% of the settlements were randomly selected for the conduct of health consumer survey. Overall, 22 settlements were selected (Table 2). This proportion is plausible, considering the homogeneity characterizing the rural settlements in the region.

In the selected settlements, the respondents to the health consumer interview were the rural household-heads while the sampling frame is made up of the residential buildings in the selected 22 rural settlements. There were 1,730 residential buildings in the selected 22 rural settlements. Using random sampling method, 20% of the existing residential buildings in each of the selected settlements were selected (i.e. one of every five residential buildings). In each of the selected residential buildings, a household-head was picked for interview during our survey, occasions when there was no person living or available in any selected building for interview, such building was replaced with another. The selection of one household-head per building is to ensure that a manageable numbers of households are selected.

Overall, in the 22 rural settlements selected for the health consumer survey, 348 rural household-heads were interviewed. The 348 rural household-heads that made up our sampling size is justifiable when compared to the Nigerian Institute of Social and Economic Research (NISER) sponsored country-wide study of demographic and economic characteristics of rural households in Nigeria conducted by Titiola[8] in which only 500 household-heads were interviewed.

Database description: The survey utilized 66 variables. Twenty (20) out of the 66 variables are health consumer variables that were selected for regression analysis to explain factors affecting patronage of health facilities by

Table 2: Classification of settlements into groups and number of settlements selected for health consumer survey in owo region

Classification interval	Groups	No of settlements	No of settlements picked for survey at 10%
20,000 and above	I	2	N.A
17,500-19,999	II	NIL	NIL
15,000-17,499	III	NIL	NIL
12,500-14,999	IV	1	1
10,500-12,999	V	NIL	NIL
7,500-9,999	VI	3	1
5,000-7,499	VII	3	1
2,500-4,999	VIII	9	1
Below 2,499	IX	177	18

Source: Computed by the Author, 2003 Note: N.A. = Not applicable because the settlements involved are urban settlements (i.e. pop. More than 20,000 persons)

Table 3: Definition of health consumers variables

Variable code	Definition of variables
INCOME	Income level i.e. the earning status of the health service consumers.
MARITAL	The marital status of the rural dwellers.
EDU	The educational status of the health service consumer
OCCUP	The occupation of the health consumers which indicates what they do for living.
RELIGION	The religion of the health consumer.
SEX	The sex of the health consumer either male or female.
AGE	The age of the health consumer usually indicated in years
HHOLD	Total number of persons in the household of the health consumer.
LIVING	The number of years the health consumer has been living in the village.
DISCHAR	Distance traveled to seek (receive) health care services in km.
MODE	Mode of travel to receive health care services
WAITT	Waiting time for public transport vehicle arrival.
RDCOND	Condition of road connecting Health facility
TRACOST	Average transport cost per trip (#)
TRATIME	Travel time to health care facilities
DISTFAC	Distance of nearest health facility
ILLTYPE	Illness type.
WAITRB	Waiting time for treatment at rural-based health facilities
WAITUB	Waiting time for treatment at urban-based health facilities
PERINCOME	% of annual income spent on health care services.
LEVEPAT	Level of patronage of health facilities

Source: Author's research design, 2003

the rural dwellers in Owo region. The 20 variables are listed in Table 3.

For the purpose of the empirical analysis, the specification rational and justification for the choice of variables are discussed. The variable of notable interest is level of patronage of health facilities Levelpat, which is the primary factor defining the readiness of rural dwellers to go extra-length to seek health care services with the intension of treating one ailment or the other, with a view to improving their health status.

Income is an important variable, defining the financial ability of the rural dwellers to pay for cost of health services and the transportation cost required to get to the point of location of these health care facilities. Like any other developing countries in Africa, the primary occupation (OCCUP) of the rural dwellers is agriculture, which is still characterized with subsistence practice. Thus, results to low Income[11]. In Nigeria, the rural dwellers are characterized by very low income[8].

Edu (Educational status) is another variable considered in the study. The effects of EDU operate through many channels. In part, this is due to multi-dimensional nature of the concept of educational outcome or achievement, which includes basic and complex cognitive skills, general knowledge, technical skills and norms and values[2]. EDU is very relevant in the development of the life of a rural dweller. First, it influences the level of earning of rural dweller, who may either be engaged in public service, or the impact of education in providing improved knowledge (scientifically) for the practice of agriculture that may lead to increase in the agricultural yield of the rural dweller[13]. Second, it provides basis for sound health education that might discourage the idea of self medication and patronage of health quacks; thereby promoting the patronage of modern health care provider[14,15].

Another variable that is very germane to the frequency of patronage and the distance traveled for seeking health care services is Hhold, i.e. number of persons in the rural dwellers household. Marital and Sex are personal variables that are relevant to the utilization of health care services in any given area. The marital status of individuals e.g. married person, spinster, widow/widower; and the sex status is either female or

male; all these would help in no small measure to influence the household decision to travel and the distance to seek specialized health care services. For instance, a married rural women needs to get the permission of her husband to seek health care services on every ailment, the selection of the location, the type and even the operator of the health care facilities would have to be approved of by the husband[16].

Another personal variable is AGE, which indicates how old an individual is and normally given in years. Age influences the ability of the rural dwellers to seek health care services at different locations. For instance, age of rural dweller might influence their ability to carry out farm-work, particularly strength to increase hecterage of cultivation. On the other hand, age might equally influence the ability to trek long distances or ride on motor-cycle (Okada) on the rugged rural roads to seek health care services.

Religion and Living are behaviour variables. The belief and the teachings of ones religion provides the basis by which such individuals seeks, the level and the extent of patronizing health care facilities; whereas Living indicates the length of stay in years for which rural dweller has been living in the village. This is expected to provide rural dwellers the knowledge about every health facility in the locality[17].

Distance is a variable indicated in Kilometre (Km), which measures the length of a distance between two locations. The nearer the location of a facility to the users, the higher the patronage which the facility might enjoy, all things being equal[18]. Therefore, the health care consumers may choose to patronize the health facilities nearest to their home Distfac. This situation may not be so in all cases due to some limitations such as the condition of road Rdcond; linking the nearest facility.

A nearest health facility connected with a poor condition of road, full of potholes might increase the cost of transportation Tracost; thereby resulting among other things to low level of patronage Levelpat. The determination of Tracost might not be rested on the factor alone. For instance, the mode of travel Mode has influence in the determination of cost of transportation[19]. This is as a result of the comfort derived, safety and the promising fastness a mode will provide over the other, which are likely to increase the fare attached to one Mode than the other.

Travel time TRATIME is a variable that depicts the time used in traveling over a given distance, which is normally indicated in 4 hrs. In rural areas, when traveling in public transport, time is spent in picking and dropping passengers at different destinations along the road in a living journey. The ruggedness of a road may equally prolong the Tratime of a journey over a rural road. Traveling on rural road particularly during the off-peak period, public vehicle operators have to wait at different road-junctions and villages 'en route' to collect passengers. The waiting time by public vehicles Waitt for passenger varies in one village to the other[19]. Cumulatively, these waiting times increase the overall travel time.

In the conduct of investigation into the patronage pattern of rural dwellers to health facilities information on type of illness Illtype formed the basis of seeking health care services[20]. The prominence of a particular illness may influence the intensity of the usage of a particular health care facility. In the treatment of an ailment in any given health facility, patient registers at the Record Unit and undergoes some preliminary medical examinations of the body temperature and blood pressure; and latter queuing at the Doctor's waiting room in group of other patients, waiting to consult with the doctor in rotation.

The times spent on these activities are referred to as waiting time[21]. The waiting time at rural-based health facilities Waitrb is low compared with the waiting time at urban-based health facilities Waitub by patients. This is due to high turn-outs of patients that are usually witnessed in the urban-based health facilities. However, the percentage of income Perincome spent on health care services by household-heads depends on the level of income. These 20 variables were considered in the determination of the factors affecting the patronage of health care facilities by rural dwellers in Woo region, Nigeria.

EMPIRICAL ESTIMATION AND DISCUSSION OF FINDINGS

The step-wise regression estimate of patronage of health care facilities by rural dwellers in Owo region is presented in Table 4. Multiple linear regression model was used. According to Bryman and Cramer[22], the equation of multiple regression of y' dependent variables i.e. level of patronage of health care facilities by rural dwellers. X_1,X_2,X_3.----X_n (dependent variables which are twenty (20) health consumer variables is given as

$$Y=a+b_1+x_1+b_2x_2+b_3x_3\text{------}b_nx_n+e\text{------Eq} \quad (1)$$

Where

X_1,x_2----------x_n are independent variables.
B_1,b_2----------b_n are multiple regression coefficient of independent variables.
a= is the intercept on the y-axis.
e= is the error terms.
y= dependent variables.

Table 4: Step-wise regression results (Estimates) relationships between level of patronage of health facilities and some (i.e. 20) patronage variables

Variables code	Regression coefficient	Beta coefficient	Absolute-value	Sig.
Constant	5.824	9.517		.000*
RELIG	1.033	0.433	7.474	.000*
EDU	0.505	-0.252	-4.690	.000*
INCOME	0.401	-0.214	-3.769	.000*
LIVING	0.309	-0.226	-4.111	.000*
DISTFAC	0.0293	-0.169	-3.604	.000*
MARITAL	0.493	-0.190	-3.980	.000*
DISHCAR	-0.246	0.208	3.638	.000*
ILLTYPE	0.111	-0.157	-2.931	0.004*
TRACOST	-0.157	-0.105	-2.127	.034**

R = 0.756, R^2 = 0.731, R2 adjusted = 0.729, F0.05,9,338 = 16.80, N = 348, Source: Field work analysis, 2003, ** = Significant at 0.05 level •= Significant at 0.01 level

In order to identify the effect of the independent variables, we have to consider the coefficient of determination. In multiple linear regression, this effect is measure by the coefficient of determination (R^2) , which is the square of the correlation coefficient. In other words, it is the ratio of the sum of the squares due to regression and the total sum of square. The coefficient of multiple determinations is used to compute dependent variable that is due to the combined effects of the independent variable.

Eq. 1 can be re-written in the light of the 20 health consumer variables fitted into the multiple regression model.

Thus, LEVELPAT =a + b_1 INCOME + b_2 MARITAL = b_3 EDU + b_4 OCCUP + b_5 RELIGION = b_6 SEX + b_7 AGE + b_8 HHOLD + b_9 LIVING + b_{10} DISCHAR + b_{11} MODE + b_{12} WAIT + b_{13} RDCOND + b_{14} TRACOST + b_{15} TRATIME + b_{16} + DISTFAC b_{17} ILLTYPE + b_{18} WAITRB + b_{19} WAITUB + b_{20} PERINCOME ---. (Eq. 2).

However, stepwise regression test was carried out and only 9 of the variables had effects on the level of patronage of health care facilities. These are shown in Table 4 and presented in Eq. 3.

The empirical result presented in Table 4 reveals that 73.1% of the variation in the patronage of health facilities by rural dwellers is jointly accounted for by the variables fitted into the model. The F-ratio (F0.05 9,338) is significant showing that the equation is reliable. The standardized coefficient (Beta) gives a picture of the relative importance or influence of independent variables on the level of health facilities.

LEVELPAT = 5.824 + 1.033 (RELIGION) + 0.505 (EDU) + 0.401 (INCOME) + 0.309 (LIVING) + 0.0293 (DISTFAC) + 0.493 (MARITAL) + -0.246 (DISHCAR) + 0.111 (ILLTYPE) + -0.157 (TRACOST) …… (Eq. 3).

From the empirical result of the step-wise regression presented in Table 4, the order of importance of the independent variables are RELIGION, DISHCAR, TRACOST, ILLTYPE, DISFAC, MARITAL, INCOME, LIVING and EDU. RELIGION is the most crucial variable affecting level of patronage of health facilities by rural households in Woo region, with a regression estimate of 1.033 and significant at 0.01 level. The existence of a mission hospital in Owo region acts as pull factor to members of the church and their relation to patronize the hospital. Furthermore, the relationship that exists on religion-wise among workers in non-mission health institutions and prospective health consumers provide the assurance of prompt attention and fair consideration in medical bill. This can sufficiently increase the level of patronage more so when such prospective health consumer is sure of fair and prompt attention from member(s) of his church working in the health Institution. The status and the division at which such worker is working notwithstanding, but can still go through his colleagues in the relevant divisions to render the required assistance to members of his/her church that are patronizing the health facility.

The next variable in order of importance is distance traveled for health care service Dishcar with regression estimate of -0.246. This implies that a unit increase is Dishcar provides 0.246 decrease in level of patronage. The longer the distance traveled to get to an health facility particularly on the poor rural roads, the lesser the level of patronage of such health facility. The share increase in the distance traveled by rural patient on poor rural road puts the patient on a very high risk health-wise; thereby discourages embarking on more trips for health care purpose.

Transport cost to health care facility location (TRACOST) is the next variable to Dishcar. The regression coefficient of Tracost is -0.157. This indicates that a unit increase in level in Tracost provides a negative impact on frequency of patronage (i.e. 0.157 decreases in level of patronage of health care facilities). The condition of rural roads in rural areas of Owo region is poor and the volume of traffic on the road is very low, thereby forcing the transport operators to increase their fare chargeable. The high transport fare is sufficient to restrict health

consumer to patronizing health facilities only for every serious illness alone.

Type of illness (ILLTYPE) is another patronage variable that contributes positively to the level of patronage of health facilities by rural households in Woo region with the regression coefficient of 0.111. Often times, the seriousness of illness prompts the use of modern health facilities, which in turn influences the frequency of patronage of health facilities. Distance location of the nearest health facilities to the home of health consumer (DISTFAC) has a regression estimate of 0.0293 and it is significant at 0.01 level. This is a very weak relationship.

Therefore, a unit increase in DISTFAC induces 0.02 increase in the level of patronage of health facilities. Even when there is an increase in the distance location of nearest health facility, it continues to attract increase patronage by the rural patients based on some reasons. First, the rural dwellers are more familiar with the health facility nearest to them. Second, it costs less in form of Tracost to reach such nearest health facility, which is likely to require low transport fare comparatively.

Marital status (MARITAL) of the rural dwellers significantly affected the level of patronage of health facilities in Owo region, with a regression coefficient 0.493. This is an indication that a unit increase in MARITAL, which rather sounds funny would induce 0.49 level of patronage of health facilities. Rural dwellers are mainly engaged in farming activities in Nigeria. Often times, they found it extremely difficult to take time-off their farm-works to attend hospitals except for very serious health problems[23]. The reason for this is as a result of the subsistence type of agricultural practice which they do; whereby the source of labour is the family members. They depend mainly on cutlasses and hoes. Therefore, taking time-off the farm means one activity and the other will suffer in the farm.

A singled-individual (i.e. unmarried person) may find it difficult to take time-off his farm-work to patronize health facilities regularly. This means a temporary abandonment of the farm. However, to a married rural dweller (often with one or more wives), the caring commitment for members of the family and the fact that a member of the family is being released to attend health care facility does not result to temporary abandonment of the family farm. Therefore, other members of the family are always available to continue with the farm-works on the family farm. This explanation justifies the increase in Marital resulting into increase level of patronage of health facilities by rural dwellers.

Income is another variable that positively affected the patronage of health facilities by rural dwellers in the region with a regression coefficient of 0.401. A unit increase in the income of the rural dwellers increases the patronage of health facilities by 0.4. Although, Nigerian rural dwellers are generally characterized by low income[4] but the resultant effect of the various poverty alleviation measures put in place by the present government in the state resulted into increase in the disposable income of the rural dwellers. This had prompted increase in their health-related expenses, particularly their readiness to afford increase in the patronage of health facilities in the region. The length of stay (LIVING) of rural dwellers is another crucial variable affecting the patronage of health facilities by rural dwellers in the region. Living has a regression estimate of 0.309. This implies that a unit increase in the length of stay in the region induces 0.31 increase in the patronage of health facilities in the region. LIVING provides very good background knowledge on the successful treatment history on available health facilities in and around the village they live. Therefore, the longer the years of stay in any particular locality, the better the opportunity to have the knowledge about the competency, the cost of treatment and hospitality of workers in health facilities within and outside the villages of their residences. Thus, the readiness on the part of the rural patients to increase their patronage of these better health facilities.

The last variable of the nine (9) health care consumer variables affecting patronage of health facilities by rural dwellers in Owo region is Educational status (EDU). Edu has a partial regression coefficient of 0.505; signifying that a unit improvement in the educational status of other rural dwellers led to an increase of 0.505 unit in the level of patronage of health facilities in the region. This linkage seems plausible. As improved educational status brightens one health awareness and exposures. It will also sufficiently equip the health consumer to be aware of the locations where better facilities are available. All these will promote increase in the patronage of health facilities that can offer qualitative health care services, not minding their distant locations within the region. The remaining eleven (11) health consumer variables i.e. OCCUP, SEX, AGE, HHOLD, MODE, WAITT, RDCOND, TRATIME, WAITRB, WAITUB and PERINCOME are not significant factors that affect patronage of health facilities by rural dwellers in Owo region, Nigeria.

CONCLUSION

This study has identified significant factors affecting patronage of health facilities by rural dwellers in Nigeria, with a focus on Woo region. The findings mirror the patronage of health facilities situation in other regions in

Nigeria and in most developing countries such as Uganda. The empirical analysis which indicates that R^2 (0.729) shows that about 73% of the variations in the patronage of health facilities by rural dwellers is jointly accounted for by the nine (9) significant variables out of the 20 variables fitted into the model.

The order of significance of the variables patronage of health facilities by rural dwellers in the region is distance traveled, transport cost, illness type, distance of the nearest health facilities to home, marital status, income of the rural dweller, length of stay in the village and educational status of the rural dwellers. Overall, the various estimates are inelastic since all coefficients are less than unity in exemption of religion which is 1.033. However, these findings have implications for the health and continuing patronage of rural dwellers to health facilities in the region in particular and Nigeria in general. The religion of the rural dwellers exhibited the most significant effect on the patronage of health facilities in the region. The fact that there is a Mission Hospital in the region, (i.e St. Louis Catholic Hospital, Owo), essentially manned by medical personnel who are members of their church such as Reverend Fathers, Sister and Brothers; and the Nurses ensure the confidence of the patients in the ability of the medical personnel.

Furthermore, the Catholic Mission Hospital Authority gives subsides to member of their church that patronize the St. Louis Catholic Mission hospital at Owo town. All these significantly encouraged patronage of St. Louis Catholic Mission Hospital in the region by rural dwellers. On the other hand, the relationships that exist on religion-wise among workers in non mission health institutions and prospective health consumers provide the assurance of prompt attention and fair consideration in medical bill. This can sufficiently increase the level of patronage, more so, when prospective health consumer is sure of fair and prompt attention from member(s) of his church working in the health institution. The working status and the divisions in which such member is working notwithstanding but can still go through his colleagues in relevant divisions to render the required assistance to members of his/her church that are patronizing the health facilities.

It is therefore necessary that the State Government should encourage the establishment of more mission-health institutions, by giving them incentives. The incentives can be in form of free land allocation for the establishment of such mission health institution, regular subventions in form of budgetary allocation and subsidized drugs supplied to the mission hospitals. This will increase the number of health facilities in the region and brings reduction in likely distances to be covered by rural dwellers to health facilities in the region. The nearest location of health facilities in the region would be further reduced and subsequently promote the patronage of health facilities in the region.

Rural road is one of the important infrastructure in the rural areas. The poor rural road network in the region is responsible for the increase in the transport fare charged by the transport operators. It is very important to note that development possibilities are very slim in rural areas unless transportation is viewed seriously by both the government and the community as an entity. Therefore, local government authorities in the region should embark on aggressive enlightenment of the rural dwellers focusing on the need to participate in community development services in their localities. This will be in area of maintaining the rural road, which need regular weeding, clearing of blocked drainages along the road and maintenance of the culverts on the roads. This approach will ensure all the year-round accessibility of the rural road connecting the villages that harbor health facilities and possibly lead to reduction in transport fare. Furthermore, the improved rural roads will generate multiplier effects on rural economy of the region and boost the income which is one of the factors that affect patronage of health facilities in the region.

When the rural economy is boosted the tendency for the rural dwellers to continue to live in the rural areas (i.e. their villages) would be very high. Their continuous living in the rural area would enrich their knowledge of knowing locations of available better health facilities. Second, it disencourages the tendency to migrate to urban centres in the region, where they might not be employed but act as burden on the urban economy.

Education is one of the significant factors affecting patronage of health facilities by rural dwellers in Nigeria. The ultimate responsibility for good health lies within the individuals. Functional education enhances consciousness of basic human rights, helps to remove cultural barriers to (disease) ailment treatment and promotes self-health through balance nutrition, personal hygiene, environmental sanitation exercise and abstinence from health destructive lifestyles. It is also necessary that the enlightenment of the rural dwellers on the existence of HIV/AIDS and how to prevent the spread among others should form the focus of the health education designed for the rural dwellers in the region.

The effect of education in the reduction of poverty had been stressed elsewhere. Therefore, the promotion of both formal and informal education by the government and non-governmental organizations particularly at the rural level, would promote further the patronage of health facilities in Owo region in particular and Nigeria as well as most developing countries in general.

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