



Research Article

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Socio-Economic Determinants of Healthcare Service Utilization among Rural Dwellers in Akpabuyo Lga, of Cross River State, Nigeria

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Abstract

Socio-economic determinants of healthcare services utilization were investigated in Akpabuyo Local Government Area using structured questionnaires, administered to adults in the study area. The general objective of this study was to determine the reason behind underutilization of orthodox health services in the area with particular attention to the socio-economic factors; specific objectives were to ascertain the influence of income level and the relationship between proximity of health facilities and utilization. The research design adopted for this study was the cross-sectional survey design; a sample size of 400 was drawn from adults, selected from each household and the Multi-stage sampling technique was utilized for the process of data collection, which consisted of the systematic random and the purposive sampling techniques. One way analysis of variance (ANOVA) and the Pearson product moment correlation (PPMC) were used in the analysis of data generated, for the purpose of arriving at a conclusion and policy recommendation. The findings from this research revealed that income level at all three categories; low, middle and high had significant influence on the utilization of healthcare services, and the proximity of healthcare facilities concerning their distance and location also had a significant relationship on their utilization. Conclusively, it was recommended that there should be equitable distribution of functional health facilities within the wards to reduce distance and travel time, as well as an improvement on household income of rural dwellers in Akpabuyo through numerous private and government interventions as well as improved commercial activities.

Keywords: Healthcare utilization, Akpabuyo, Proximity, Income, Rural dwellers

1. Introduction

Healthcare utilization is the adequate use of available healthcare services by the people. The healthcare utilization of a population is influenced by the availability, quality and cost of healthcare services, socio-economic structure of the environment as well as the personal characteristics of the user (Onah, Ikeako & Iloabachie, 2009). The underutilization of health services in the public sector has been a universal adverse phenomenon in developing countries (Zwi, Brugha & Smith, 2001), contributing to a high rate of neonatal, under-five and maternal mortality rates (United Nations, 2015). Primary Health Care (PHC), as a strategy to make healthcare accessible to all, irrespective of where they live or work has indeed brought healthcare services nearer to the people, even in the remotest areas (World Health Organization, 2004).

In an effort by the Federal government to revitalize the worsening state of health, the National Health Insurance Scheme (NHIS) was established in 2005 by Decree 35 of 1999 which provided for

the establishment of a governing council with the responsibility of managing the scheme (Laws of the Federation of Nigeria, 2000). In spite of the several inadequacies of the Nigerian healthcare system, recent studies have suggested that if managed well, the NHIS could be a useful ground for good healthcare delivery (Akande 2006; Osuchukwu, Osonwa, Eko, Uwanede, Abeshi & Offiong, 2013). At its present state, the scheme is not effectively functional to the rural dwellers in Akpabuyo Local Government Area (Agba, Ushie & Osuchukwu, 2010).

1.1 Research hypotheses

Two hypotheses formulated to guide the conduct of the study were:

1. There is no significant influence of income level on the utilization of healthcare services among rural dwellers of Akpabuyo Local Government Area.
2. There is no significant relationship between proximity of health facility and the utilization of healthcare services in Akpabuyo Local Government Area.

2. Literature Review

Many factors or variables impede rural dwellers from seeking care because almost three quarters of rural Nigerians have at least one problem accessing healthcare services with concern over cost, drugs, availability, and distance to a health facility most often cited when they are located in urban or rural areas (Ayodele, Idemudia & Madu, 2001). The most vulnerable group according to a survey reviewed by 2008 Nigeria demographic and health survey (DHS), are rural women seeking antenatal care to deliver their babies with no skilled birth attendant present in these healthcare centres (World Bank, 2008).

2.1 Income level and healthcare services utilization.

Majority of Nigerian youths are either unemployed or underemployed, this is particularly a serious concern in the rural areas where the number of the rural poor is roughly twice that of the urban poor (National Bureau of Statistic, 2016). Low economic status has also been linked to lower levels of primary care and higher levels of emergency room use (Janicke & Finney, 2000). Moreover, Williams (2002) stated that low-income women had poorer health than women with higher income levels. Onokerhoraye (1999) in a study carried out in Bayelsa State on choice of healthcare service, identified the following as determinants of healthcare service utilization among rural dwellers such as, level of income, cost of service, availability of alternative medical service in the locality, perception of attention and distance of healthcare facilities which involve cost of travel and time spent to reach these healthcare facilities. In the same vein, Akpabuyo rural communities is faced with high cost of medical services relative to the level of income of the people, and the fee charge were likely to discourage people particularly the poor from choosing orthodox healthcare services.

2.2 Proximity to the health facility and utilization.

Transportation availability, travel distance to healthcare facilities, possession of a driver's license and a car also determines an individual's ability to access healthcare. A negative relationship between distance to a healthcare facility and number of chronic and regular care visits for adults has been observed (Arcury, Gesler, Preisser, Spencer, Sherman, & Perin, 2005a). Generally, healthcare utilization is limited in Akpabuyo and studies have attributed this to many reasons, for instance long distance to healthcare facilities has long been established as one of the barriers to the healthcare utilization, and such physical barriers to accessing healthcare facilities have also been implicated as a determinant of child mortality in rural Akpabuyo (Onwujekwe, Uzochukwu & Kirigia, 2012). Onokerhoraye (1999) further asserted that lack of equity in planning and distribution of healthcare facilities over the years have brought about the transportation problem experience and its attendant cost.

3. Theoretical Framework

The Anderson's healthcare utilization model was applied to this study, to demonstrate the factors that influence the use of health services. It is a multilevel conceptual model that considers both the

individual characteristics as well as environmental factors.

3.1 Andersen's behavioural theory (the behavioral model of health services utilization).

The behavioral model of health services utilization (BMHSU) developed by Andersen & Newman (1973), Andersen & Aday (1978), and Andersen (1995). The model juxtaposes actual use of health services against some illness level to assess individual health behaviour and health services utilization. In its original version, Andersen presented a framework in which healthcare use is influenced by the individual's propensity to seek services, factors that promote use, and the need for medical care. Later versions of the model were expanded to include environmental factors (Andersen, 1995).

Many studies have assessed healthcare utilization as the number of visits to the primary care provider while others included in-patient hospitalization days, emergency department use, and total healthcare use (Janicke, Finney & Riley, 2001). The determinants of healthcare utilization can be classified into three overarching categories: environmental (e.g. healthcare system and external environment), individual characteristics (e.g. predisposing characteristics and enabling resources) and need factors (perceived and evaluated need). These individual, need, and environmental characteristics, are the independent variables in the operational BMHSU, which act together to influence the individual's decision to seek medical care, choice of services accessed, and amount of services consumed.

Andersen (1995) incorporates the idea of equitable access to identify disparities in medical care utilization among population subgroups. Access is considered equitable so long as individual, rather than societal variables drive volume and type of use. On the other hand, differences in healthcare access and utilization due to area of residence would be considered inequitable due to environmental differences. The independent variables of environmental, individual, and need factors are also classified along a continuum of "mutability" to indicate the ease with which they can be altered. Characteristics difficult to change, such as race or age, rank lower on the continuum while educational level ranks higher. The concept of "mutability" facilitates the promotion of equitable access, and can therefore serve as the nexus for targeted policy creation and implementation.

Although Andersen's theory has been a genuine tool in identifying the factors that influence the utilization of health services, the shortfall is the scope of the theory. This theory was originally developed to study healthcare services utilization in the developed economy of North America, which has just one source of healthcare, the orthodox medicine. This theory did not account for the influence of a complementary health sources the unorthodox medicine or traditional medicine which is widely patronized by the people of Akpabuyo Local Government Area. Despite this shortfall, the theory is still very useful in explaining healthcare services utilization in diversity of settings, including Nigeria.

4. Research Methodology

The research design used is the cross-sectional survey design. The study was conducted in Akpabuyo Local Government Area of Cross River State, which is predominantly an agricultural setting, the study population is approximately 367,523 according to the National population census (2006). The study area comprised of ten administrative wards, majority of health facilities in Akpabuyo LGA are categorized under the primary health care system, with a distribution of 38 primary health facilities within the 10 wards, in the form of primary health care centres and health posts. St. Joseph's General hospital is the only secondary health facility in the area. The sample size for the study covered 400 respondents derived using the Taro Yamene's formula, the target populations are the adults in Akpabuyo Local Government Area; an adult was selected from each house as respondent to the study.

The sampling technique adopted in selecting samples was the Multi-Stage sampling technique; which consisted of the cluster random sampling, purposive sampling and the systematic random sampling procedures. Foremost the cluster random sampling technique was adopted to represent the 10 council wards, all wards were selected. Within each of these 10 wards, 2 villages with health facilities and another 2 without health facilities were purposively selected. To get the

actual respondents from these selected villages, the systematic random sampling technique was employed. This involved the enumeration of the buildings in each selected village of the council ward, after which the even numbered buildings, were chosen and adult respondent from a household in each building were given questionnaire. 400 questionnaires were administered, collected or returned and used for analysis.

The measuring instrument used by the researcher for this research study is a four point Likert scale-type questionnaire. The questionnaire was divided into two sections; Section A contained demographic variables of respondents, while Sections B contained information pertaining to our subject of study based on the hypotheses formulated and tested.

5. Data Presentation

The demographic variables of respondents in the study are presented in Table 1.

Table 1: Demographic information

Variable	Category	Frequency distribution	Percentages
Gender	Male	191	47.8
	Female	209	52.2
	Total	400	100.0
Age	20years and below	35	8.8
	21-25years	82	20.5
	26-30years	55	13.8
	31-35years	88	22.0
	36-40years	81	20.3
	41years and above	59	14.8
	Total	400	100.0
Marital status	Single	180	45.0
	Married	164	41.0
	Separated	27	6.8
	Divorced	14	3.5
	Widowed	14	3.5
	Total	400	100.0
Occupation	Health worker	71	17.8
	Teacher	54	13.5
	Farmer	68	17.0
	Businessman/woman	52	13.0
	Artisan	48	12.0
	Others	107	26.8
	Total	400	100.0
	#5-10,000.00	123	30.8
	#11-15,000.00	39	9.8
	#16-20,000.00	30	7.5
Monthly income	#21-25,000.00	59	14.8
	#26-30,000.00	57	14.3
	#31-35,000.00	25	6.3
	#36-40,000.00	16	4.0
	Above #40,000.00	51	12.8
	Total	400	100.0
	Non formal Education	33	8.3
Educational level	Primary level	157	39.3
	Secondary level	157	39.3
	Tertiary level	53	13.3
	Total	400	100.0
Distance	Below 2 km	138	34.5
	Above 2km	262	65.6
	Total	400	100

Source: Author's field survey 2015

Table 2 showed the responses of respondents to the sub-variable on level of income with four options of either “strongly agree, agree, disagree or strongly disagree

Table 2: Responses on level of income

S/N	Statement	SA	percent	A	percent	D	percent	SD	percent
1	Whatever it will cost me I will use health centres when I am ill.	171	42.8	135	33.8	63	15.8	31	7.8
2	Poverty influences orthodox health services utilization in Akpabuyo.	125	31.3	194	48.5	52	13.0	29	7.3
3	Due to high cost of drugs rural dwellers often prefer traditional medicine.	152	38.0	177	44.3	50	12.5	21	5.3
4	Ante-natal, child delivery and post-natal services in health centres are expensive as a result of which patronage is low.	131	32.8	178	44.5	52	13.0	39	9.8
5	Traditional medical practitioners are more financially lenient, thus reducing orthodox facilities utilization.	118	29.5	173	43.3	69	17.3	40	10.0

*The numbers of people who responded to each item are as indicated.

Source: Author's field survey 2015

As presented in Table 3, the responses of respondents to the sub-variable on proximity to healthcare facility with four options of either “strongly agree, agree, disagree and strongly disagree”.

Table 3: Responses on proximity to healthcare facilities

S/N	Statement	SA	percent	A	percent	D	percent	SD	percent
1	Closeness to health centres affects their patronage by rural dwellers in Akpabuyo.	134	33.5	160	40.0	62	15.5	44	11.0
2	Means of transportation to healthcare facility does not affect their utilization.	90	22.5	155	38.8	102	25.5	53	13.3
3	High cost of transportation due to distance negatively influences utilization of healthcare facility.	140	35.0	177	44.3	50	12.5	33	8.3
4	Availability of means of transportation to the health centre determines their utilization.	126	31.5	188	47.0	60	15.0	26	6.5
5	Long distance hinders healthcare facility utilization.	132	33.0	173	43.3	47	11.8	48	12.0

*The numbers of people who responded to each item are as indicated.

Source: Author's field survey 2015

6. Analysis Result

The results of data analyzed with test of the two hypotheses are as follows

6.1 Test of hypotheses one

There is no significant influence of income level on healthcare services utilization among the rural dwellers of Akpabuyo Local Government Area. In this hypothesis the independent variable is income level and it was categorized into three groups (low, middle and high) while the dependent variable is healthcare services utilization. To test the hypothesis one way analysis of variance (ANOVA) was used to analyze the data. The result is presented in table 4.

Table 4: ANOVA for income level and healthcare services utilization

Variable	N	Mean	Std		
Low	157	12.63	12.63		
Middle	157	15.82	0.77		
High	86	18.86	0.85		
Sources of variance	SS	Df	Mean square	F	Sig.
Between group	2245.309	2	1122.655	715.413	0.00
Within group	622.988	397	1.569		
Total	2868.297				

*Significant at $p < .05$; $df = 360$; critical F-value = 1.96

Source: Author's analytical construct 2015

Table 5: Scheffee post hoc multiple comparisons for income level

(I) income level	(J) income level	Mean difference (I-J)	Std. error	Sig.
Low	Middle	-3.19108 [*]	.14139	.000
	High	-6.22352 [*]	.16805	.000
Middle	Low	3.19108 [*]	.14139	.000
	High	-3.03244 [*]	.16805	.000
High	Low	6.22352 [*]	.16805	.000
	Middle	3.03244 [*]	.16805	.000

Source: Author's analytical construct 2015

6.2 Test of hypothesis two

There is no significant relationship between proximity and healthcare services utilization among the rural dwellers of Akpabuyo Local Government Area. The independent variable is proximity to health facility while the dependent variable is healthcare services utilization. Pearson product moment correlation was adopted to test this hypothesis and reported in Table 6.

Table 6: Pearson product moment correlation of proximity to health facilities

Variables	N	M	SD	r.value	Sig.
Proximity to health facility	400	14.73	2.75	0.345*	0.00
Healthcare services utilization	400	15.22	2.68		

**significant at 0.05 level, $df = 398$, critical r value = 0.195

Source: Author's analytical construct 2015

7. Discussion of Findings

The findings from hypothesis one, revealed that there exist a significant influence of the level of income on healthcare services utilization among rural dwellers in Akpabuyo Local Government Area. This implied that, the level of income, and hence poverty is one of the determinants of healthcare services utilization among rural dwellers in Akpabuyo Local Government Area. This findings is supported by Ahonsi (2010) who notes that, the health value of the human life in rural communities has been compromised because of poverty further asserting that, health capital to rural development should be accepted because countries which take good care of her citizen's health have much lower level of poverty irrespective of their per capital income.

The second hypothesis revealed that there exist a strong relationship between proximity of health facilities and healthcare services utilizations. This meant that among rural dwellers in Akpabuyo, closeness to health facilities affected their utilization. There is always distance barrier for

rural dwellers to access these healthcare services, which is compounded by the problems of bad, slippery roads with deep potholes and gullies created by erosion and non-maintenance cumulating into increase cost of visits. The availability of comfortable and affordable means of transportation, distance and time taken to reach health facility unabashedly influences health services to the health facilities.

The National Health Insurance Scheme (NHIS) which was established in 2005 by Decree 35 of 1999 is not presently functional to the rural dwellers in Akpabuyo Local Government, utilizing public health services. This ineffectiveness has further reduced the enabling factors of the rural dwellers to patronize these facilities, as against the traditional healthcare facilities where they are able to pay as at when they can afford or with farm products due to the informal mode of communication and interaction.

8. Conclusion

Conclusively, it is evident that low income and lack of proximity of health facilities has been identified as the major barriers to adequate healthcare services utilization. Non-functional health facilities should be revived as a priority move to increase and improve the utilization of healthcare services. From this study, it can be derived that households with higher income are more likely to spend more money in seeking medical care than households with lower income, and the closer the health facility to the populace the better the utilization.

9. Recommendations

The household incomes in Akpabuyo can be greatly improved upon through the access of credit schemes to a larger percent of farmers, as at now only less than 5 percent of farmers benefit from agricultural credit schemes (Cross River State Government: AKPALEED, 2013).

This credit scheme would improve the scale of farming and better their negotiation for sale of their produce, thereby improving employment rate in that environment. Income levels could also be improved upon by the presence of veterinary services in the locality to help boost fishery and livestock production.

The commercial activities in Akpabuyo Local Government Area can be improved on, by obtaining government assistance in promoting fishery practices into larger scales, by promoting deep sea fishing and the establishment of a fish processing and canning industry. The building of a modern structured market for sale of farm and livestock produce, fishing products, and other products, with access to water and toilet facilities would be a welcome development leading to aggregation of people from far and wide. The construction of a better road network to and within Akpabuyo would also assist in the commercial activities in the area, and encourage business activities as most of the roads were not passable especially during the rainy seasons. Tourism and culture sites in Akpabuyo LGA needs to be developed into a place of resorts to promote income such as the first story building built centuries ago, and the first motor car bought during the slave trade

Similarly, indicator problems such as poor road networks, access to transportation, public and private partnership in healthcare utilization should be encouraged to address the challenges of equitable distribution of health facilities, so as to avert the barriers of healthcare service utilization. While these findings are encouraging, more research is clearly needed by government which can improve the efficiency and financial viability of health services delivery to women seeking antenatal care in Nigeria generally and Akpabuyo community in particular, particularly in light of renewed commitment to improve the conditions of the poor. These recommendations if adhered to, will not only improve the utilization of healthcare services by the rural dwellers of Akpabuyo, but can also be applied to other rural communities in the country with similar situations. It will also help to reduce the poverty level of the people as poor health and poverty is obviously a vicious cycle each causing and resulting to each other.

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