Choice of Health-Care Service Utilization by the Elderly in Delta State of Nigeria

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ABSTRACT The choice of Health-Care utilization, generally, is determined by a number of factors including nearness to Health Care Facility and Belief System. This study specifically examines factors that influence the choice of Health-Care system by the elderly. Data for this study were collected from a sample of 180 rural households utilizing the Multi Stage Stratified Random Sampling Technique. The descriptive method was used. Results show that a number of factors such as distance from Health Care Facility, Belief System, Quality of Health service received and finance were important determinants of choice of Health Care System utilized by the elderly. This finding has implications for public policies relating to the health needs of the elderly which hitherto concentrated on the structure and physical availability of health facilities.

INTRODUCTION

In recent years, interest has increased in the study of determinants of the use of health services. This interest appears to have originated from cultural, social, psychological and economic influences that affect variation in the use of health care services. The major factors include personal attributes which may predispose individuals to seek medical care, the need for the service evidence by the illness and enabling factors such as financial capability to pay for the service, accessibility to location of health services and the knowledge of service network. Ntembe (2009) found the following variables as determinants of choice of health care service; cost of health care service, quality of service, cost of consultation and proximity of health facility to patients significantly determine choice of health care service utilization. There is evidence that the consumers choose the facilities to which access is easier and where payment is flexible (Nguyen et al. 2008). There is further evidence that socio-economic and demographic conditions play an important role in choosing health care providers (Bir and Eggleston 2002). For instance, the effects of users fees on access to health care have been studied widely arriving at various conclusions. Some of these studies show little significant effect of user fees on utilization of medical care (Akin et al. 1986). However, many of the results are in consonance with economic findings, that utilization is sensitive to user fees (Lavy and Germain 1994; Gupta and Dasgupta 2000;

Sahn et al. 2003). The differential responses by various consumer groups to variations in the cost of health services estimated from the elasticties of income and prices of facility choice mean that user fees may not have the same impact on various income groups. The poor for example, tend to be more responsive to price changes than the non-poor because such charges may significantly affect their disposable income (Ntembe 2009).

The implementation of users fees in many developing countries is closely related to the Structural Adjustment Programme initiated to address the severe economic recession of the 1980s (Chawla and Ellis 2000; Mariko 2003).

A large number of recent studies assume that the interaction of the price and income variables have found the demand for health care to be inelastic with respect to price (Mwabu et al. 1994; Dow 1995; Gupta and Dasgupta 2000). Other studies have focused on the impact of quality of services provided which have a large effect on choice of health care provider (Litvack and Bodart 1993; Chawla and Ellis 2000; Mariko 2003; and Sahn et al. 2003).

Consumer behaviour in general practice is explainable in terms of spatial accessibility to goods and services. The general assumption is that consumers of goods and services conform to basic principle of economic rationality which aims at optimality in decision making or choice of goods and services consumed. This implies patronizing the nearest service centre in order to minimize distance. Studies have emphasized the significance of distance as an important factor

on consumers of health services (King 1973; Van Etten 1972). Implicit in all these efforts, however, is that distance does not explain everything. Some other efforts have gone beyond looking at distance to identifying some other factors. Iyun (1980) in a study showed that most patients would choose health care providers which they consider would give the best service rather than the ones nearest to them.

Previous micro-economic analyses which examined the main determinants of health seeking behaviour, have relatively small focus on Sub Sahara African countries, particularly the effect of direct costs on health care seeking behaviour. For example, significant price effect have been found by several researches, including: Gertler and Vander Gang (1990), Ngugi (1991), Litvack and Bodart (1993), for Cameroon; Lavy and Germain (1994) for Ghana; for Cote d'Ivoire. All of them found the introduction of user fees as reducing the usage of public health services, particularly for the poor. However, Lacroix and Alilhonou (1982) for Benin, and non-African evidence from Akin et al. (1998) in Sri Lanka and World Bank (1987) research on the Philippines, have suggested that cost has relative little impact on behaviour of health care users Lawson (2004). The above has clearly shown the impact of cost of health care services on the demand for it. Evidence has also shown that distance to health facility has been found to be an important factor associated with decrease in seeking of health care services. This has been found by Lavy and Germain (1994), Lavy and Quinley (1995), in Ghana and Appleton (1998) for Kenya.

Gender disparities in access to health services have been studied in a number of places. Generally, time constraints and opportunity costs faced by women are higher than for men, thus deterring them from access to health care services to a large extent. For example, Mwabu et al. (1994) found distance and users' fees as factors that reduced their health seeking behaviour. Deinngier and Mpuga (2003) found users fees as important determinant to accessing health services, particularly for poor people.

Quite a number of studies demonstrate that the decision to use a particular medical channel is informed by numerous socio-economic variables, sex, age, the social status of women, the type of illness, access to services and perceived quality of the services (Tipping and Segall 1995). In outlining the factors responsible for such patterns, there exist two broad trends. Firstly, there are two broad modes. There are studies which categorize the types of barriers or determinants which lie between patients and services. In this approach, there are numerous categorizations and variations in terminology such as there are studies which fall under geographical social economic, cultural and organizational factors. These categorizations can further be broken down to explain the type of measures that are frequently taken in seeking health care. These are grouped under reoccurring determinants which are placed into key spheres of influence: Informal, Infrastructure and Formal.

Secondly, there are studies that attempt to categorize the type of processes or pathways utilized in health care seeking behaviour.

The Health Care Utilization Model

Anderson and Neuman (1975) grouped in a three sequence cluster of factors, which are predisposing, enabling and need factors that are capable of influencing health behaviour. This model was developed to investigate the use of biomedical health services. Other versions have extended the model to include other health care sectors, that is, traditional medicine and domestic treatment (see Weller et al. 1997. Figure 1 shows the different categories.

The factors organized in the categories of the Health Care Utilization Model following the one developed by Weller et al. (1997) are as follows:

Predisposing Factors: These include age, gender, religion, global health assessment, prior experience with illness, formal education, general attitude toward health services, knowledge of illness, etc.

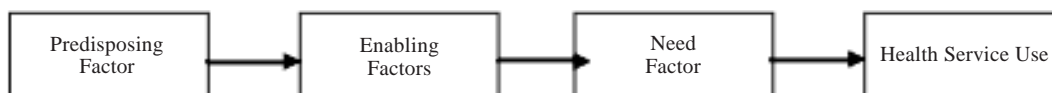*Enabling Factors:* These include availability of services, financial resources to purchase

Fig. 1. Health care utilization model

services, health insurance, social network support, etc.

Need Factor: Perception of severity, total number of sick days for a particular illness, total number of days in bed, days missed from work or school, help from outside from caring, etc.

Treatment Action: Includes home remedies (herbal, pharmaceuticals), pharmacy over counter drugs, from ships, traditional healers, private and public and private health services etc.

The model which focuses particularly on treatment selection has also been used for gaining evidence on the weight of different factors for health service utilization. On the basis of data collected on demographic and health surveys, a comparative study of six African countries has been carried out using the categories proposed by Andersen, Fosu (1994)

The present study adopted the above model in examining the choice of Health Care Service Utilization by the elderly in Delta State of Nigeria. The present study is concerned with factors that influence choice of health care service utilization by a selected sample of elderly in Delta State of Nigeria.

MATERIAL AND METHODS

The Study Area: Delta State is one of the states created on August 27, 1991 out of the defunct Bendel State by the President Ibrahim Babangida's administration. It is situated in the South-South Geo-Political zone of Nigeria. It has a 25 Local Government structure. Delta State lies roughly between longitude 5 and 6 45 east, and latitude 5 and 6 30 north. The State is bound on the North by Edo state, on the west by Ondo State; on the east by Anambra state and on the south by Bayelsa State. On the southern flank is the Bight of Benin, which covers approximately 160 kilometers of the State's coast line. The State is generally low-lying without remarkable hills. The State has a tropical climate. It has an estimated population of . According to the 2006 Population Census, the population of Delta State was estimated to be 4,098,391. The State capital is situated in Asaba.

The data for the present study was collected in the first quarter of 2010 that is, between January and March 2010.

Data and Sampling Procedures: The present study was based on primary data collected through a well-structured questionnaire. The structured questionnaire contained questions on demographic characteristics of the elderly and questions on types of treatment sought, reason for choice of treatment sought and how level of education, level of income, distance from health service provider, severity of illness and user fees affect choice of health care service sought. The stratified random sampling technique was used. This was done in stages. At the first stage, the study which covers Delta State was stratified into three zones using the existing Senatorial districts namely North, Central and South. Secondly, two Local Government Areas were selected from each of the Senatorial districts. At the third and final stage, household with individuals that are over sixty years of age were selected randomly. On the whole a total of 180 elderly people were selected from 30 villages for the study.

Method of Data Analysis: The analytical techniques used in this study, include descriptive statistics such as percentages, and Chi-square used to examine the relationship between level of education, level of income, distance between the elderly and Health Service providers, severity of illness, users fees and the type of health care service sought by the elderly.

RESULTS AND DISCUSSION

Table 1 shows that majority of the respondents (56.70 percent) were between 60 – 65 years old. 23.90 percent and 19.40 percent of the total respondents fall within 66-70 years and 71 years and above respectively. Also, 67.7 percent of the respondents were male, while 32.22 percent were female. The marital status of the respondents reveals that 58.88 percent of the respondents were married, while 25.56 percent and 15.56 percent of the respondents were divorced and widowed respectively. The table further shows that majority of the respondents were Christians representing 7.66 percent. 25.56 percent and 2.78 percent of the respondents were those who believe in African Traditional religion and Islam respectively. Enquiry into the educational attainment of the respondents reveals that 51.67 percent of the respondents have no formal education; 31.68 percent had primary/Secondary School Education, 8.88 percent attended Trade Schools, 4.44 percent had NCE/Polytechnic Education and 3.33 percent obtained University Education. The monthly income quartiles of the elderly studied indicates that majority of the elderly fall within

the lowest monthly income quartiles ie those who earn under N7,500 and between N7,500 – N15,000 monthly. This accounts for 35.00 percent and 25.56 percent respectively. 20.56 percent of the elderly included in the present study earn between N15,000 and N31,000. A small proportion of the elderly in the study representing 11.66 and 7.22 percent earn N31,000 – N65,000 and above N65,000 respectively. The primary occupation of the respondents reveals that 38.33 percent of the respondents were farmers, 34.44 percent of the respondents were not engaged, 21.67 percent of them were engaged in petty trading, 3.89 percent and 1.67 percent of the respondents were contractors and engaged in secretariat duty respectively.

Table 1: Demographic characteristics of respondents

Variables	No. of respondents	Percentage (%)
Age (N=180)		
60 – 65 years	102	56.70
66-70 years	43	23.90
71 years and above	35	19.40
		100.00
Sex (N=180)		
Male	122	58.88
Female	58	32.22
		100.0
Marital Status (N=180)		
Married	106'	58.88
Divorced	46	25.56
Widowed	28	15.56
		100.0
Religion (N=180)		
Christianity	129	71.66
Moslem	05	2.78
African trad. rel.	46	25.56
		100.0
Educational Qualification (N=180)		
University	06	3.33
NCE/Polytechnic	08	4.44
Trade school	16	8.88
Pry/Secondary school	57	31.68
No education	93	51.67
		100.0
Level of Monthly Income Quartiles (N=180)		
Under N 7,500 - (1st) Lowest	63	35.00
N7,500 – N15,000 - (2nd)	46	25.56
N15,000 – 31,000 - (3rd)	37	20.56
N31,000 – N65,000 - (4th)	21	11.66
Above N65,000 – (5th) Highest	13	7.22
		100.0
Primary Occupation (N = 180)		
Farming	59	38.33
Trading	39	21.67
Contractor	7	3.89
Secretarial duty	3	1.67
Not engaged	62	34.44
		100.0

Source: Field work 2010

Table 2 presents the source of health care service patronized by the elderly in the study. The table reveals that 40.56 percent of the respondents patronized chemists and pharmacist's shop. 19.44 percent patronized traditional healers/herbalists, 17.18 percent sought treatment from regular hospitals and clinics. The table also reveals that 16.67 percent and 15.55 percent of the respondents got their medical needs from medical hawkers and self medication. The implication of the above distribution is due to the fact that majority of the elderly studied belong to the monthly income quartiles. This accounts for why most of the elderly studied patronized chemist/pharmacy which they found cheaper than regular hospital and clinic considering their economic conditions.

Table 2: Types of health care service utilization by the elderly

Type of health care service utilization	No. of respondents	Percentage	Ranking
1. Regular hospital/Clinical	32	17.78	3rd
2. Traditional healers/Herbalist	35	19.44	2nd
3. Chemists/Pharmacist shops	73	40.56	1st
4. Medical hawkers	30	16.67	4th
5. Self medication	10	15.55	5th
Total	180	100.0	

Source: Field work 2010

Table 3 indicates the reasons for choice of health care services utilized by the elderly. The table shows that 36.67 percent of the elderly studied claimed that user fees which is the amount charged by health care service provider is a major determinant of choice of health care service utilized by them. 23.89 percent of the elderly claimed that the level of monthly income is a major factor in their choice of care service utilization. Furthermore, 17.22 percent of them claimed that distance from the source of health care service as an important consideration in the choice of health care service utilization. 12.22 and 10.00 percent of the respondents claimed that severity of ailment and belief system respectively are determinants of choice of health care service utilization by them. The implication of the above analysis is that people will want to consider user fees in determining choice of health care service utilization by the elderly.

Table 4 reveals that the calculated Chi-Square value of 40.75 is greater than the critical table value of 26.30 at 0.05 level of significance which

Table 3: Reason for choice of health care service utilization by the elderly

Reasons for choice of health care utilization	No. of respondents	Percentage	Ranking
1. Users fees	66	36.67	1st
2. Distance from health services	31	17.22	3rd
3. Belief system	18	10.00	5th
4. Monthly income	43	29.90	2nd
Total	180	100.0	

Source: Field work 2010

rejects the null hypothesis. This implies that there is a significant relationship between level of education and type of health care service utilized by the elderly in the study. The study revealed that a large proportion of the respondent with no education and low education level patronize chemist/ pharmacy shops, medical hawkers and indulge in self medication in the treatment of ailments. This can be explained as being due to their not being exposed and aware of the adequacy and efficacy of western methods of treating aliments. The implication here is that education is a determinant of the choice of health care service utilized by the elderly in this study. This corroborates earlier studies by Bir and Eggleston (2002)

Table 5 portrays that the calculated Chi-square value of 28.65 is greater than the critical table value of 26.30, which rejects the null hypothesis in the study. The implication here is that there is a relationship between level of income and type of health care service treatment utilized by the elderly in the study. The study revealed that a large proportion of the respondents patronize chemist/pharmacy shops, medical hawkers and embrace self medication. The major factor here is the poor level of income of the elderly, which

prevent them from patronizing modern Health service which are more expensive. Given the low level of income of a large proportion of the elderly in the study, there is a possibility that they would likely patronize a cheaper source for treatment of their ailments. The implication here is that the level of income is a major determinant of choice of treatment sought by the elderly. This confirms the position of earlier studies Ntembe (2009), Bir and Eggleston (2002).

Table 6 presents estimate of the Chi-square analysis of the relationship between distance from health service provider and the choice of health care service utilization by the elderly. The Chi-Square analysis revealed that the calculated chi-Square of 14.64 is greater than the critical table value of 9.49, which rejects the null hypothesis in the study. The implication is that there is relationship between distance from health service provider and the type of treatment sought by the elderly in the study. The study revealed that a large proportion of the elderly in the study would prefer to patronize health service providers that are closer to them particularly in critical conditions. The implication therefore is that distance from health service provides is a major determinant of choice of treatment sought by the elderly. This validates earlier studies by Van Ellen (1992), King (1973), Nwabu (1993) and Ntembe (2009).

Table 7 depicts the estimates of Chi-square analysis of the relationship between severity of illness and the choice of health care service utilization by the elderly. The Chi-square analysis revealed that calculated Chi-square of 21.23 is greater than the critical table value of 15.51, which rejects the null hypothesis in the study. This implies that there is a relationship between severity of illness and the value of 15.51, which rejects the null hypothesis in the study. Thus, the

Table 4: Estimates of Chi-Square analysis of level of education and types of health care service utilization by the elderly

Type of health care service utilization	Level of education					Total	df	χ^2 Co	χ^2 Cal	Remark
	1	2	3	4	5					
Type of health care service utilization										
Regular hospital/Clinic	3	5	4	8	12	32 (17.76)				
Traditional healer/Herbalist	2	3	7	9	14	35 (19.44)				
Chemist/Pharmacy	1	0	3	28	41	73 (40.56)	16	26.30	40.75	Significant
Medical hawker	0	0	2	8	20	30 (16.67)				
Self medication	0	0	0	4	6	10 (15.55)				
Total	6	8	16	57	93	180				

P > 0.05

Table 5: Estimate of Chi square analysis level of income and type of health care service utilization by the elderly

Type of health care service utilization	Level of income						df.	χ^2 Co	χ^2 Cal	Remark
	1st	2nd	3rd	4th	5th	Total				
Regular hospital/Clinic	16	3	5	5	3	32 (17.78)				
Traditional healer/Herbalist	6 8	714	84	97	102	35 (19.44)				
Chemist/ Pharmacy	1124	1216	1318	147	158	73 (40.56)	16	26.30	28.65	Significant
Medical hawker	1610	1711	187	192	200	30 (16.67)				
Self medication	215	222	233	240	250	10 (15.55)				
Total	63	46	37	21	13	180				

P>0.05

Table 6: Distance from health service providers and choice of health care service by the elderly

Choice of health care service utilization	Distance from health service provide		Total	Df	χ^2Co	χ^2 Cal	Remark
Regular hospital/Clinic	9	23	32				
Traditional healer/Herbalist	11	24	35				
Chemist/ Pharmacy	21	52	73	4	9.4	14.9	Significant
Medical hawker	10	20	30				
Self medication	4	6	10				
Total	55	125	180				

P > 0.05

severity of illness will determine the type of treatment sought by the elderly. It is therefore a determinant of choice of treatment sought by the elderly. This collaborates earlier study by Tipping and Segall (1995).

Table 8 shows estimates of the Chi-square analysis of the relationship between user fees that is amount charged by Health Care Provider and choice of health care service utilization by the elderly. The analysis revealed that the calculated Chi-square value of 41.10 is greater than the critical table value of 15.51 at 0.05 level of significance which rejects the null hypothesis in the study. This implies that there is a significant relationship between the amount of fees charged by the Health Service Providers and the choice of treatment sought by the elderly in the study. The study revealed that a large proportion of the

elderly would normally patronize health service providers where fees charged are lower than those that charge high fees. This shows that the amount charged by health service providers is a major determinant of choice of health service utilization by the elderly in the study. This collaborates earlier studies by Ntembe (2009), Nwabu (1993), Deinngier and Mpuga (2003).

CONCLUSION

There is need for an understanding of the determinants of health care utilization which provides a basis for Government's is reform and health policy.

This study presents strong evidence to support the view that the choice of Health Care Utilization is determined by a number of factors

Table 7: Estimates of Chi-Square (X^2) analysis of severity of illness and choice of health care utilization by the elderly

Choice of health care service utilization	Level of severity of illness			Total	Df	χ^2C_0	χ^2CAL	Remark
	High	Moderate	Low					
Regular hospital/Clinic	18	8	6	32 (17.78)				
Traditional healer/Herbalist	20	10	5	35 (19.44)	8	15.51	21.23	Significant
Chemist/ Pharmacy	45	18	10	73 (40.56)				
Medical hawker	17	8	5	30 (16.67)				Self
Medication	5	3	2	10 (15.55)				

P > 0.05

Table 8: Users fees and choice of treatment sought by the elderly

Choice of health care service utilization	Levels of users fees charged			Total	Df	$\chi^2 C_0$	$\chi^2 CAL$	Remark
	High	Moderate	Low					
Regular hospital / Clinic	6	8	18	32 (17.78)				
Traditional leader/Herbalist	9	10	16	35 (19.44)				
Chemist/Pharmacy	11	19	43	73 (40.56)	8	15.51	41.10	Significant
Medicine/Table	5	9	16	30 (16.67)				
Self medication	6	4	0	10 (15.55)				
Total	37	50	93	180 (100.0)				

$P > 0.05$

particularly among elderly people. Evidence from the study reveals that the major determinants of choice of Health Care Utilization include user's fees, level of income, distance from health-care service, severity of illness and level of education. The study found user's fees charged by health- care providers to be the most important determinant of choice of health care utilization among the elderly who utilized chemists/pharmacists, medical hawkers and self medication. This points in the direction of free or subsidized health care policy.

The study confirmed a link between type of treatment sought by the elderly and level of education, level of income, distance from health service providers, severity of illness and user's fees charged by health service providers. The above factors were found to be major determinants of choice of health care utilization among the elderly in the study.

It shows that the accessibility and cost of health-care utilization are very important determinants of choice of health care utilization. There is therefore an urgent need for government to incorporate these determinants into programmes and policy aimed at ensuring health care for this special category of persons.

RECOMMENDATIONS

The findings from the study show that if government is planning to expand and improve health care delivery, it needs to consider how best to include the provost income group in Nigeria and Delta State in particular. This has become important because income users fees and distance from health service are important determinant of choice of health care service utilization particularly with the elderly patients who would prefer a health care provider that is stress free. Policy – makers need to have this at the back of their mind

when developing strategies and policies aimed at increasing access to health services and reducing health inequalities in Nigeria and Delta State in particular.

Based on the findings the following recommendations are made. The study shows that income and user fees were major determinant of choice of health care service utilization. Thus, there is the need for government to subsidize cost of health care services particularly for the elderly.

Government, in citing health care service should also put into consideration the elderly. This is to enable the elderly access health care services in the face of the constraint of movement by this group of people.

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