

Public Health Seeking Behavior and Poverty Status of Rural Household Heads: A Case of Ijebu North-East Local Government Area of Ogun State

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Abstract: *The study was embarked upon to determine the factors that influence public health care seeking behavior based on the poverty status of households in rural areas. Both Primary and Secondary data were employed. The primary data were collected with well-structured questionnaire while the secondary data was gotten from the local government records. Benefit incidence analysis and Multinomial Regression model used were to determine whether the poor benefit from government expenditure on health and the factors that influence household behavior in seeking health care. The results showed that majority of the households were male-headed with average age of 40 years, married, educated and live below the poverty line. The most preferred place of seeking medical services was government hospital and the common ailment among the household was malaria. The mean expenditure of the households was N9,398. Years of education, presence of hygiene facilities and registration cost increased the likelihood of households' patronage of private clinics. Age of household head, family size, presence of hygiene facilities, communication access (GSM), drug and registration cost increased the likelihood of households patronage of chemist. Years of education of household head, registration cost and hygiene facilities increased the likelihood of household patronage of self-care. The result further showed that the average spending on health by households is N456.40 while the health subsidy accruing to household from government is N687.98. Benefit incidence analysis shows majority of government spending accrued to the poor.*

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Introduction

Health is a state of complete physical, mental and social wellbeing merely the absence of disease of infirmity (World Health Organization (WHO) 1946). In 1986, this definition was reformulated as a resource for everyday life, not the objective of living. Hence the definition health is a positive concept emphasizing social and physical resources as well as physical and mental capacity (WHO 1986)

As it is commonly said "Health is wealth" and it plays a major role in the life of every individual particularly the less privilege in the grassroots (rural areas). Whether or not illness can be cured or even mitigated, health care satisfies felt need, one to which the people are prepared to devote substantial manpower and financial resources in nearly all societies at all times. It is when the health status of every individuals in the society is good that they can contribute meaningfully there quota to the development of their society, thereby increasing the gross domestic earning accruable to the nation.

Health care in much of the developing country can be grouped into two tier system namely a sophisticated and expensive hospital care system in urban areas and a network of primary health care (PHC) clinics that complement the hospital system and offer basic, preventive services to low income families in both urban and rural areas. The latter concept gained widespread support following the Alma Ata Declaration of 1977 where an emphasis on prevention and basic care was put forward as an affordable and much needed approach to ensuring health care, it was widely embraced and PHC system have proliferated across the developing world. All over the world, health promotion programmes are gradually focusing on the idea that providing knowledge about causes of ill health and choices availability will go a long way toward promoting a change in individual and household behavior toward more beneficial health seeking behavior.

A range of factors would influence people's health. Some of these may be fixed while many are informed by socio-economic circumstance. There is also a growing acceptance that a wide range of social, economic, cultural and environmental factors, including poverty, also affects health. These may relate to living and working conditions and include experience of unemployment, quality of accommodation level of education, social and community network and supports, the built environment and work environment as well as access to health care service

Millions of people are trapped in a vicious circle of ill health and poverty. Over the past one and a half decades quality of life in Nigeria has received considerable attention in the literature. Such studies have examined the incidence and dimension of poverty in Nigeria. The major conclusion from these studies is that poverty is that poverty is intense and widespread in the country. For instance, the incidence of poverty increased from 28.1 percent in 1980 to 46.3 percent 1985. The poverty problem grew so worse in the 1990s that in 1996, about 65.6 percent of the population was poor, while the rural areas accounted for 69.3 percent (FOS, 1999). Recent data showed that in 2004, 54.4 percent of

Nigerians were poor(FRN, 2006). Meanwhile, poverty increased from 54 per cent in 2004 to about 69 per cent and 72 per cent in 2010 and 2011 respectively (NBS, 2005;2010). Thus the way in which sick individual or their caretakers in the home perceive their illness could determine what type of health care they will seek and how much money and household member' time is committed for seeking treatment. Also, while seeking care in the health sector, the sick face choices that vary from government hospitals and health centres of clinics, mission institutions e.t.c.

In Nigeria where less than 6% of the population has access to modern health care services (Idowu, et al, 2005), it suffice to say that health care delivered in Nigeria is in shamble and much serious effort needs to be exhibited by everyone involved in the health sector because it has taken many years of gross neglect, inadequate funding, poor management of limited facilities and resources, social depreciation and economic depression of the people who have become underprivileged and deprived of their due share to enjoy good health. Understanding the main determinant of health care demand behavior can be vital in furthering knowledge of how changes in government policy will impact on individuals and their demand of health care services.

Objectives of the Study

The broad objective of this study is to determine the factors that influence public health care seeking behavior based on the poverty status of households.

The specific objectives are:

1. Describe household access to public health services.
2. Compute the poverty status of the household in the study area.
3. Analyze the benefit incidence of government expenditure on primary health care
4. Determine the factors that affect public health-care seeking behaviour among households.

Literature Review

Health care seeking behavior pattern is describing who is getting which type of health services and is closely related to issues of equity of access to health services. Furthermore Ward, et al (1997) defined healthcare seeking behavior as activity undertaken by individuals who perceive themselves to have a health problem or to be ill for the purpose of finding an appropriate remedy. According to Diop, et al (1998) treatment and provider choice are key aspects of health seeking behavior whose patterns depend not only on the quantity and the composition of the supply of health services, but also on the quality composition of the supply of health services, financial and geographical access of these services and the information and perceptions that households and individuals have about their relative efficacy. Patterns among different segments of the population highlight key policy issues relating to who benefits form health services. Furthermore, utilization patterns of different levels of the health system may have broad implication for efficiency of the health sector, Choice of level may be influenced by a variety of mechanisms, including prices charged contingent on how responsive the use of health services is to prices.

Strategic policy formation in all health care systems should be based on information relating to health promoting, seeking and utilization behaviour and the factors determining these behaviours. All such behaviours occur within some institutional structure such as family, community or the health care services. The factors determining the health behaviours maybe seen in various context: physical, socio-economic, cultural and political. (Kroeger 1983). Factors which influence which treatment sources people seek when symptom occur include socio-cultural factors like beliefs and household decision-making to seek care, social networks, gender and economic status (puentas, 2000: Okejie 1994)Also, according to Katung (2001); Fatimi and alvan (2002), Uchudi (2001), Stephenson et al (2004), the utilization of the 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.

Researchers have long been interested in what facilitates the use of health services and what influences people to behave differently in relation to their health. There has been a plethora of studies addressing particular aspects of this debate, carried out in many different countries: they can simplistically be divided into two types, which roughly correspond with a division identified by Tipping and Segall (1995). Firstly, there are studies which emphasize the 'end point' (utilization of the formal system, or health care seeking behavior). There is often a tendency for studies to focus specifically on the act of seeking 'health care', although data are also gathered on self-care, visit to more traditional healers and unofficial medical channels, these are other seen largely as something which should be prevented, with the emphasis on encouraging people to opt first for the official channels (Ahmed, et al 2001). These studies demonstrate that the decision to engage with a particular medical channel is influenced by a variable, sex age, the social status of women, the type of illness, access to services and perceived quality of the service (Tipping and Segall, 1995). In mapping out the factors behind such patterns, there are two broad trends. Firstly there are studies which categories the types of barriers or determinants which lie between patients and services. In this approach, there are as many categorizations and variations in terminology as there are studies, but they tend to fall under the divisions of geographical, social, economic, cultural and organization factors.

Second, there are studies that attempt to categorise the type of processes or pathways at work. Bedri (2001) develops a pathway to care model in her exploration of abnormal vaginal discharge in Sudan. She identifies five states where decisions are made and delay may be introduced, towards adoption of 'modern care'. She says there are four 'sub pathways' that women may follow, from seeking modern medical care immediately, to complete denial and ignoring of symptoms. This approach offers an opportunity, to identify *key junction* where there may be a delay in seeking competent care, and is therefore of potential practical relevance for policy development. For example, in order to optimize the pathways taken by women, Bedri suggests husband should be involved in health education programmes about vaginal discharge, and women should be enabled to conduct home vaginal swabs. Bedri's study is particularly interesting as is compares health care seeking behavior

around vaginal discharge and malaria, revealing predominantly the role of the husband, social networks and cultural customs. This clearly has implication for health systems development.

The view is often that the desired health seeking behavior is for an individual to respond to an illness episode by seeking first and foremost help from a trained allopathic doctor, in a formally recognizes health care setting. Yet a consistent finding in many studies is that, for some illnesses, people will chose traditional healers, village homeopaths, or untrained allopathic doctors above formally trained practitioners or government health facilities (Ahmed et al, 2001). There are variations witnessed, and apart from differences according to type of illness, gender is a recurring one of them. For example, Needham et al, (2001) found women in Nepal were more likely than men to seek help from traditional healers first. The scale of this may be reflected in findings from a recent study by Rahman (2000) in rural Bangladesh where 86% of women received health care from non-qualified health care providers. This has implications for diagnosis and women have been found to have significantly longer delays to diagnosis then men (Needham et al, 2001). Despite the ongoing evidence the people do choose traditional and folk medicine or providers in a variety of contexts to enable individual preferences to be incorporated into a more responsive health care system. For example, Ahmed et al (2001) conclude: efforts should be made to raise community awareness regarding the importance of seeking care for trained personnel and the availability of services". Nonetheless there is now growing recognition of the need to be more sensitive to the realities of health care seeking behavior. For example, in Bangladesh there is a large and growing sector of non-qualified allopathic providers engaged in the traffic of modern pharmaceuticals. They provide an accessible means of reaching Western medicines to a wider range of the population, yet lack formal medical training. There is therefore the accompanying problem of bad, unregulated prescriptive practices. Incorporating these unqualified providers into more formal training may there be beneficial (Ahmed et al, 2001). Uzma, et al (1999) also suggest incorporating unqualified TBAs into training programmes for maternal health in order to improve the health status of women. Thus increasing health-care seeking behavior studies are coming to the conclusion that traditional and unqualified practitioners need to be recognized as "the main providers of care" (Rahman, 2000) in the relation to some health problems in developing countries. In acknowledgement of the fact that untrained non-Western practitioners remain a strong favourite, Outwater, et al (2001) interviewed traditional healers and unofficial sources of health care. Through this they recognized, as have others (Moses et al, 1994) that some group appears to "wander" between practitioners rather than seek care through one avenue or provider. Similarly, (Rahman, 2000) found that different facilities will be frequented for different needs, according to a complex interplay of factors, sometimes regardless of the intended purpose of those facilities. Thus there is growing acknowledgement that health care seeking behaviours and local knowledge need to be taken seriously in programmes and interventions to promote health in a variety of contexts (Price, 2001; Runganga, Sundby and Aggleton, 2001). With this broader appreciation of behavior, some have suggested the need to improve integration of private sector providers with public care (Needham et al, 2001). Calls have been made for explicit recognition of the potential to combine the two worlds by involving unofficial providers in official training and service provision (Green, 1994; Outwater et al,

2001). However, Ahmed et al concede that whilst extending training to such providers may enhance their services, training in itself will not change practice. For this managerial and regulatory intervention is needed. Thus the provision of medical services alone in efforts to reduce health inequalities is inadequate (Ahmed et al, 2000). Clearly any research interest in health care seeking behavior, focusing on end point utilization, needs to address the complex nature of the process involved, cognisant of the fact that the particular 'end point' uncovered.

Of the previous micro econometric analysis which has looked at the main determinants of health seeking behavior there is relatively little which focuses on Sub Saharan African countries, and that which does has produced quite mixed results, particularly in regard to the effects of direct costs on health care demand. For example, strong significant price effects have been found by several researchers, including; Litvack and Bodart (1993) for Cote d'Ivoire. Furthermore, Ngugi (1994) for Kenya, all of whom found that the introduction of user fees reduced the usage of public health services, particularly for the poor. However, Lacroix and Alihonou (1982) for Benin, and non-African evidence from Akin and Hutchinson (1999), in Sri Lanka and the World Bank (1987) research on the Philippines, has suggested price to have relatively little impact on health care demand.

Evidence on the impact of the other main supplier specific variable, distance to health facility, is less mixed and has commonly been found to be an important factor associated with decreases in health care demand. For instance, negative impacts of the distance on usage of health services have been found by Lavy and Germain (1994), Lavy and Quigley (1995) in Ghana and also Appleton (1998) for Kenya. The latter of these also found distance to have a significantly if accessibility were easier. For income factors, Akin and Hutchinson (1999), found the by-passing of local facilities in favour of higher quality not to be income group sensitive and that the more seriously ill were likely to travel further than those less ill. However, analysis by income groups, by Li (1996) for Bolivia and Alderman and Gertler (1989) for Pakistan, found wealthier households to be more price inelastic. Nwabu, et al, (1993) found that distance and user fee were both factors that reduced demand for health care, but men were less constrained than women. Furthermore, Li (1996) found that Bolivian women were more likely to use medical facilities than men, whilst Chem, Huq and D'Shouza (1981) found that male children in Bangladesh under five years of age were more likely to receive treatment than their female counterparts. Male bias was also found in other parts of Asia by Das Gupta (1987), for rural Punjab, but rarely in the African context. For education there are mixed findings with Wolfe and Behrman (1984) for Nicaragua and Behrman and Wolfe (1987) finding a positive association with health care demand. However, Akin, et al. (1998) and Dor and van der Gaag (1988) found that education had no effect on the decision to choose a doctor. Of Uganda specific evidence, Hutchinson (2001) provides the only published micro econometric work. He pooled data from early Ugandan household surveys (1992) and found distance and government ownership all had significant negative relationships with seeking care. More specifically he found that for each extra kilometre travelled to the health unit, usage fell by approximately 1% and that the poor were more willing to pay a higher price to reduce the time price and those children in the lowest income quintiles demanded care the least. Deininger

and Mpuga (2003) also found user fees to be particularly important in determining access to health services, particularly for the poor and concluded that more than just the elimination of fees is required. There are a large number of models of health-seeking behavior which propose to explain why an individual chooses to use or not use different kinds of health 'services'. Two well-known models include Andersen's behavioral model (BM) (V. Andersen 1968, 1995) and the health belief model (HBM) (V. Rosenstock, 1974; Stock, 1987; Third & Andersen, 2002), through the use of 'predisposing' (demographic; social structure and health beliefs) enabling (personal and community-related; service availability) and 'need' factors (actual and perceived severity of illness, general health). 'Enabling' and in particular 'need' factors tend to explain most of the variation in health services use, although Andersen (1995) state that perceived need is itself a consequence of social structure and health beliefs. In the past the BM has been criticized for being too broad to be able to capture the complexity and dynamic nature of health seeking behavior, having neglected such factors as social networks culture, health beliefs and organizational factors (Pescosolido and Kronenfeld, 1991; Rogers et al., 1991). Newer versions of the BM however have attempted to incorporate these factors, including feedback loops to explain the dynamic nature of health service use as a function of consumer satisfaction with the service provided and health outcomes (Andersen, 1995). The HBM focuses on perceived susceptibility, severity, people's believe they are susceptible to a condition, believe that it may have a serious outcome, believe that a particular course of action will prevent, reduce or ameliorate the perceived susceptibility or severity and believe that the perceive or curative (Janz et al., 2002). In an evaluation of the use of 46 studies using the HBM, Janz and Becker (1984) found that 'perceived barriers' was the most powerful predictor overall, perceived susceptibility was severity more important for preventive behavior than sick-role behavior, and preventive behavior. Overall, 'perceived severity' was the weakest predictor. The weakness of the HBM is that is limited to accounting for as much of the variance in individuals' health related behaviors as can be explained by their attitudes and beliefs' (Janz & Becker, 1984) and these are not always measured in the same way across economic status and past experience are known to have a strong influence on health seeking behavior and these are sidelined in the HBM (Kasper, 2000; Ogden 2004).

Methodology

The Study Area

The area of study is Ijebu North- East Local Government Area (LGA) headquartered in Atan, some 20km from Ijebu Ode and about 100km from Abeokuta, the capital of Ogun State. The local government came into being on the 13th of December 1996 having been carved out of Ijebu Ode Local Government. This was in line with the attempt to bring governance to the doorstep of the people by the defunct administration of Late General Sanni Anacha. The LGA is bordered by Ijebu East Local Government in the east, Ijebu North Local Government in the north, Ijebu Ode Local Government in the south and Odogbolu Local Government in the west.

The weather condition in the study area is characterized by fairly good rainfall experienced in the dry months of November to April with a range of 250mm and rainy season with a range of 500mm-1000mm in the wet month of May-October. The average temperature ranges between 25^oc-27^oc

coupled with humidity ranging from 75% to 115%. The main agricultural produce of the area are oil palm and cassava with arable crops such as maize. The predominant occupation of the people of the local government can be classified as farming trading and civil services. A Yoruba ethnic group fluent in Yoruba and Ijebu as the main dialect, has 26 health care centers, 33 primary schools, 9 secondary schools 1 school of health technology, 4 community banks, 8 guesthouses and hotels and over 10 local industries.

Types and Sources of Data

The study utilised both primary and secondary cross sectional and time series data. For primary data, simple random sampling technique was used to sample 10 households each in each of the 10 wards of the local government. Information were elicited through the use of well-structured questionnaire on the factors that influence the behavior of households in seeking healthcare and the choice of provider based on their poverty status, benefits accruing to individuals who utilize primary health centres, their expenditure, extent of usage and most importantly how well the government fund these centres. Data were also collected on socio-economics characteristics (age, gender, education, income family size, health profile (illness type), health facilities (type of care), access and utilization (physical proximity, transportation mode and cost, drug availability), choice of health service provider (self-care, private clinics, government clinics, home nurses, religious centers, chemist, drug hawkers, traditional healers, quacks and herb sellers), satisfaction and hindrance.

The secondary data were collected from the health department and finance department of the local government area to know government expenditure on health services.

Analytical Technique

Descriptive statistics such as percentages, mean, median and mode were used to describe the socio-economic characteristics of respondents. Multinomial logit regression model was used to isolate factors that influence household behavior in seeking health care and Benefit Incidence analysis was used to determined extent of Government expenditure and who benefit most (the rich or the poor) from such expenditure. The Multinomial logit regression model assumes the household chooses the provider that gives highest level of utility.

Construction of Poverty Line

Poverty line was constructed to categories households into different expenditure groups using Foster, Greer, Thordecke (1984) poverty measure given by:

$$P_{\alpha}(y, z) = \frac{1}{q^n} \sum_{i=1}^q \left(\frac{Z - y_i}{Z} \right)^{\alpha}$$

P = poverty status of respondents

Z = Poverty line

Y₁=per capital expenditure of each poor household

n = sample size

q = number of household below poverty line

This was done by taking the proportional shortfall in expenditure for each poor household, raising the shortfall to a power to reflect the concern for the depth of poverty, taking the sum of these for all poor individuals and normalizing the sum by the population size. The degree of concern for the poverty was fixed at α equals zero. This gave the headcount index the respondents were categories into core poor, moderately poor and non-poor based on the mean per capital household expenditure on basis needs. The relative poverty measure was used. The categories are.

1. Those that spend less than 1/3 of the mean household per capital expenditure are referred to as core poor.
2. Those that spent more than 1/3 of the mean household per capital but nor more than 2/3 of it are known as moderate poor group
3. Those that spend more than 2/3 of mean per capital household expenditure are classified Non poor.

Benefit Incidence Analysis

According to Castrol-Leal Florencia (1999), the group specific benefit incidence of government spending on primary health care is given as;

$$X_j = \frac{H_{ij}S_i}{H_i}$$

Where, X_j = value of total health subsidy charged to group i.e expenditure groups

S_i = government net spending on health

i = primary health care

H_i = total number of registered patients

H_{ij} = Number of registered patients of group j

S_i = Unit subsidy of providing health centre

J = groups (poor and non poor)

Household per capital expenditure = $\frac{\text{Total household expenditure}}{\text{Household size}}$

The total household per capital expenditure is calculated by finding the summation of the entire household's per capital expenditure for the sample household studied.

The mean per capital expenditure is calculated by dividing the total expenditure by the total number of household surveyed.

Mean per capital household expenditure = $\frac{\text{Total household expenditure}}{\text{Household Surveyed}}$

Deriving from the above, households can be categorized into three;

1. Core poor; those who spend less than one-third of mean per capital household expenditure (MPCHHE).
2. Moderately poor; those that spend equal to or greater than two-third of MPCHHE.
3. Non poor; those that spends equal to or greater than two-third of MPCHHE.

Therefore, the benefits accruing to each of the categories from government expenditure on PHC can be computed

Multinomial Logit Regression

The household's choice of medical providers is a discrete decision, which is consistent with qualitative choice models. In this qualitative choice situation, we presume that an individual/household can choose several alternatives: to seek self-care treatment, private clinics treatment, government clinics, home nurses, religious centrers, chemist, drug hawkers, traditional healers, quacks and herb sellers. In choosing to obtain medical services from whom, individuals and households consider a variety of characteristics of the alternative providers, such as proximity and quality. The decision is also affected by the characteristics of individual's health status in the households, education, age, gender and so on. This can be elaborated upon with general descriptive with concepts from the standard micro economics theory of utility maximization. Utility in this instance, therefore depend upon the attributes of health care choice j which varies with both the choices and characteristic of the individual (What Greene, 2000 calls a mixed model)

An individual or household chooses among alternatives based on the utility of each alternative. More specifically, we can follow (Manshi and McFadden 1981) to posit that the utility of choice option j to individual or household I , U_{ij} is:

$$U_{ij} = V_{ij}(M_i, H_i) + \varepsilon_{ij} \quad (1)$$

$V(M_i, H_i)$ represents utility determined by observed data.

M is a vector of individual economic and health status.

ε is a vector of unobserved components.

J denotes provider choice alternatives (Self-care treatment=0, private clinics treatment=1, government clinics=2, home nurses =3, religious centres =4, chemist = 5, drug hawkers =6, traditional healers =7, quacks= 8, herbs sellers= 9 and ε which will be treated as a random variable).

Utility-maximizing behavior implies that an individual/household I will only choose a particular alternative j if $U_{ij} > U_{jk}$ is also random. The probability of any given alternative j being chosen by an individual/household can be expressed as:

$$P = P(U_{ij} > U_{jk}) \text{ for all } k \neq j \quad (2)$$

By substitution of (9)

$$P = P(V_{ij} + \varepsilon_{ij} > V_{ik} + \varepsilon_{ik}) \text{ for all } k \neq j \quad (3)$$

Rearranging

$$P = P(\epsilon_{ij} - \epsilon_{ik}) > (V_{ij} - V_{ik}), \text{ for all } k \neq j$$

By knowing the distribution of the random ϵ 's the distribution of each difference $\epsilon_{ij} - \epsilon_{ik}$ for $j, k \neq i$, and by using equation (3) calculate the probability that the individual/household will choose alternative j .

Letting $X_{ij} = (M_j H_i)$ and assuming V to be a linear function of components of X , we operationalize equation 3 as;

$$U_{ij} = \beta_j X_{ij} - \epsilon_{ij} \tag{4}$$

Where β_j is a vector of coefficient values indicating the effect of the various X_{ij} 's on individual i 's utility for option j .

Assuming that each β_j for all alternative j distributed independently, identically in accordance with the extreme value distribution and given this distribution for the unobserved components of utility, the probability that the household will choose alternative j is

$$Pr ob(optionj / X_{ij}) = \frac{Exp(\beta_j X_{ij})}{Exp(\beta_{jk} X_{ijk})}$$

Where $K=1$

The parameters of this model can be estimated straightforwardly using maximum likelihood method based on whether the household is poor or non- poor.

Result and Discussion

Descriptive Analysis on Socio-economic Characteristics of Respondents

Table 1 shows the descriptive analysis of various socio-economic variables on sampled respondents. Socio-economic factors have been observed to influence and affect household activities. Below are the identified socio-economic variable that influence the living standard of the sampled respondents.

Table 1: Socio-economic Characteristics of Respondents

Variables	Number of Respondents/ Frequency	Percentage Distribution (%)	Cumulative Percentage
Distribution of Household Head			
Male	82	82	
Female	18	18	
Total	100	100	
Distribution by Marital Status			
Married	78	78	
Not Married	22	22	
Total	100	100	
Age of Household Heads			
< 30years		24	

31 – 40		41	
40 – 59		24	
> 60		11	
Total		100	
Distribution of Household Head by Education			
Primary		19	
Secondary		34	
Tertiary		29	
None		18	
Total		100	
Distribution of Household Head by Occupation			
Trading	21	21	21
Artisan	27	27	48
Civil Service	25	25	23
Farming	20	20	93
Others	4	4	97
Private Establishment	3	3	100
Total	100	100	
Distribution of other Members of Household by Occupation			
None	44	44	44
Full Housewife	8	8	52
Trading	33	33	85
Civil Service	13	13	98
Farming	-	-	-
Others	2	2	2
Total	100	100	
Distribution of Presence of Facilities Owned by Respondents			
Electricity	100		
Radio	96		
Fridge	33		
TV	66		
Bicycle	15		
Motorcycle	31		
Car	16		
Phone	52		
Generator	15		
Pit Latrine	68		
Flush Toilet	29		
Piped Borne H ₂ O	66		

Cement Floor	100		
Distribution of Treatment Venue Among Households			
Government	51	51	51
Self-care	10	10	61
Private	10	15	76
Chemist	24	24	76
Total	100	100	100
Distribution of Ailments that Affects Household			
Malaria	70		70
Others	30		100
Total	100		
Distribution of Preferred Treatment Venue across Marital Statues of Household Head.			
	Single	Married	Total
Government Hospital	4	47	51
Self-care	5	5	10
Private hospital	6	9	15
Chemist	7	17	24
Total	22	78	100

Source: Field Survey Note: since N=100, Frequency=N

Table 1 shows 82% of the household heads were male while only 18% were female; a confirmation of the male dominance in household headship. Female headship of household has always been attributed to widowhood, divorcee or single individual, especially in this part of the globe. The headship structure of households is buttressed by the fact that 78% of the household head sampled were married while only 22% were not married. Age-wise, more than 89% of the sampled households' head were between 30 and 59 years while only 11% have their household heads above 60 years of age. This shows that the majority of the household heads in the study area were in their middle age and are generally known to be productive. Table 1 further shows that majority of the households (34%) had secondary school education, 29% had tertiary education, 19% had primary education while 18% of the household head had no formal education.

Moreover, Table 1 shows that households' head were productively active as 21% were traders involved in buying and selling one thing or the other, majority (27%) were artisans such as engaged in tailoring, mechanics and so on. 25% were civil servants working in government establishments, 20% were farmers while 3% work with private establishments such as banks and telecommunication outfit. A delve into occupational status of the sampled household members revealed that 44% of them were dependants not involved in any kind of occupation while 8% of them were full time housewife keeping the home whom refrain from branding as dependants in order not to spark the ire of gender advocates. Since availability and ownership of facilities can improve or deteriorate the health status of households, table 1 shows that all household have access, possess and make use of electricity, radio

(96%), refrigerators (33%), access to telecommunication (52%), health information gingles, and promos on health issues that can enhance their health. However, only 30% of sampled respondent have access to piped borne water and means of transportation in addition danger posed by low means of food preservation (refrigerators -33%) and high number using latrine for toilet.

On the choice of health care venue, the table shows that 51% of the households patronize hospitals, 15% private hospitals and 24% visits chemist and over the counter stores for treatment when they are ill when dis-aggregated by marital status, households with married heads (47%) more than single (4%) patronized government hospital. This reveals households preference for government hospital when in need of treatment. However, a considerable number of household's visiting chemist gives room for concern. The table further confirms malaria as the major ailment as 70% of the respondents indicated it as ailment that affects household while 39% constitute other ailments such as tuberculosis, dysentery and so on.

Household Expenditure and Poverty Status of Respondent

The level of household expenditure on basic needs is presented in Table 2. This was done by taking the average expenditure on the basis of household needs. It is apparent that more than half of the total average monthly expenditure is spent on food, which implies that for sound health, food is normally given priority by households. This is in concord with Adenegan et. al. (2002) and Idowu (2005) in their works on Analysis of Government expenditure on Nigeria Primary School and Primary Health Care respectively while Ojo (2006) reported same in his work on Economic analysis of Solid Waste Management.

Monthly expenditure on other basic items except health care constitutes about 20% of the average monthly expenditure. Health care accounted for a mere 4.8% of the total household expenditure.

Table 2: Distribution of Respondents by Average Monthly Expenditure on Basic Needs

Item	Average Amount (₦/month)	Percentage Distribution (%)
Food	7,024	74.74
Clothing	968.0	10.30
Shelter	941.0	10.01
Health	456.4	4.86
Total	9389.4	100

Source: Field Survey

The mean per capita Expenditure (MPCE) per month of the households is ₦7,003/month (with average of 4 members in each household) and within the context of the poverty lines set in the methodology, any household spending less than two-thirds of the MPCE per month is poor while the core poor spend less than one-third of the MPCE. This means that each individual in the total household survey is expected to spend ₦7,003 per month as any individual who spends less is said to be poor.

Accordingly, 40% of the households belong to the non-poor group, 20% are in the core poor while 40% of the respondents are moderately poor (Table 3). This implies that about 60% of the total surveyed area are poor and do not enjoy better quality of the basic requirements. With more than half of the household survey being poor, it confirms the growing concern of the increase in the number of poor as reported by Adenegan et. al (2002) and Olowa et al (2013).

Table 3: Poverty Status Category

Group	Amount(N)	Percentage Distribution(%)
Core poor	<2,334.37	20
Moderate poor	2334.37-466878	40
Non poor	>4668	40

Sources: Field survey

Table 4 presents the distribution of household heads by sex across the poverty groups. 21% of unmarried household head were non-poor, 19% of married households head are non-poor while 59% of married household heads are prone to be poor because of high responsibilities of taking care of many dependents.

Table 4: Distribution of Household Head Across Poverty Group

	Poverty status			Total
	Non poor	Moderate Poor	Poor	
Female	13	4	1	18
Male	27	36	19	82
Total	40	40	20	100

Source: Field Survey

Table 5: Distribution of Household Head Average Income across Poverty Group

Income	Poverty status			Total
	Non Poor	Moderate Poor	Poor	
<7000	10	16	11	37

7000-25000	17	24	9	50
>25,000	13	10	-	23
Total	40	40	20	100

Sources: Field Survey

The distribution of household head by income size across poverty group is shown in Table 5. 10% of household head income is less than ₦7000, while 17% of household heads have their income between ₦7000 and ₦25,000 while only 13% earn higher than ₦25,000. The Table also show that 27% of household heads whose income is less than ₦7000 are either moderately or core poor while 35% whose income is between ₦7000 and ₦25,000 are poor. This shows that many households head with income less than ₦25,000 are poor.

Table 6: Distribution of Treatment Venue across Poverty Status

	Poverty status			Total
	Non Poor	Moderate Poor	Poor	
Government	11	27	13	51
Self care	16	8	7	31
Private	11	4	-	15
Chemist	2	1	-	3
Total	40	40	20	100

Source: Field Survey

In Table 6, the result of the exploration of patronage of different categories of health care facilities by household across poverty groups is presented. The Table shows the poor house heads which constitute more than half of the sampled household heads prefer to use government hospitals (50%) or resort to self-care method (15%). While 11% of the non-poor households patronize private clinic or resort to self-care or use government hospitals reluctantly. This shows that majority of poor households prefer government hospital because of the low cost of health services. It should also be noted that the level of use of public facilities determines to appreciable extent the benefit accrue to individuals from government subsidy on such facility.

Determination of Government Subsidy in the Provision of Health Care

To determine government subsidy in the provision of health care, the government expenditure account is used in estimating unit subsidies. Unit subsidy is based on actual expenditures by government. Thus, government unit subsidy represents the total amount of government spending per patient. It is calculated using the $X_{(poor)} = H_{(poor)} \times \frac{S_i}{H_i}$ formula where

S_i = Government Spending in the local government

H_i = total number of required patients in the local government

From the data obtained from the local government health authority in Ijebu North East Area (2010)

Total expenditure of registered patient = 11, 6144

Total expenditure on health P.a = ₦7,990,142.80

Therefore, using to calculate government unit subsidy

$$\text{Unit subsidy} = \frac{7,990,142.80}{11,614} = \text{N}687.98$$

Average Amount spent by household on health/month = N456.40

Total spending on health = N687.98 + N456.40 = N1144.38

Table 7: Household and Government Spending on the Health Care

Health spending	Amount (N)	% Distribution
Average household spending	456.40	39.9
Government unit subsidy	687.98	60.1
Total	1144.38	100.0

Source: Author's Calculation from field survey

From the table, it shows that government health care spending is higher than household health spending in the local government area. This implies that for every N1 of government unit subsidy for providing health care to households, the household spend 0.60k in gaining access to the health care provided by the government.

Specific benefit incidence of government spending of health case according to group

According to Castrol-Leal florencia (1999), benefit incidence of government expenditure is given by X_i

$$= H_{ij} \frac{S_i}{H_i}$$

Where X_j = value of health subsidy charged to group

H_{ij} = number of patients registered of group g at the group level.

Government subsidy = N687.98

Total number of patient – 11,614

Total health subsidy = 687.98 x 11,614

=N7,990,199.72

H_i = total number of patients (poor group)

$$= 11,614 \times 0.60$$

$$= 6,968.4 \approx 6,968 \text{ patient}$$

H_i = total number of patients (non-poor group)

$$\therefore = 11,614 \times 0.4$$

$$= 4,645.6 \approx 4,646 \text{ patients}$$

The benefit incidence of government spending on health care to the moderately poor group

$$X_{(poor)} = H_{(poor)} \times \frac{S_i}{H_i}$$

Where $X_{(poor)}$ = value of total health subsidy changed to the poor

$H_{(poor)}$ = Number of registered patients of the poor group

$$\therefore X_{(poor)} = 6968 \times 687.98$$

$$= \text{N}4,793,844.64$$

Benefit incidence of government spending on health care to the non-poor

Where: $X_{(non\ poor)}$ = value of total health subsidy changed to the non poor

$H_{(non\ poor)}$ = Number of registered patients of the non poor group

$\therefore X_{(non\ poor)} = 4,464 \times 687.98$

~~4~~3,223,874.28

Table 8: Benefit Incidence of Health Spending by Group

Group	Benefit incidence	Percentage Distribution
Poor	4,793,844.64	59.8
Non Poor	3,223,874.28	40.2
	8,017718.92	100.0

Source Calculated from field survey

From the table, it is observed that the higher percentage of government spending accrues to the poor group. This is so because this group utilizes the services provided by the government most since they have the highest number of patients. This support the finding of Adenegan et. al. (2002) that the more the use of government provided facilities, the greater the benefit incidence of government unit subsidies accruing to the group

Multinomial Logit Regression Analysis

The establishment of public health centre is a form of public spending by government aimed at improving the living standard of people and nations productive health. It is also a concurrent responsibility to which every citizen is entitled to. They live well and meaningfully contribute to the nation at large in the face of alternative: economic, social and health factors that may prevent patronage.

From the multinomial logit regression analysis carried out in determining preferred alternatives i.e. (government, self-care, private clinic and chemist) in which government health centers stands as the reference, the following observations were inferred.

It was observed that the factors that will make households to prefer private clinics (health centers owned by individuals, groups and specialists) are number of years of education of the household head, ownership of means of transport e.g car, presence of hygiene facilities (flush toilet and piped water) and ability of afford transport cost.

It was observed that the total number of years of education of the household head exhibition a positive relationship with the patronage of private clinic in that the higher the level of education (access of further education form elementary to tertiary level) the higher the preference for private clinics to government owned hospitals. This can be attributed to increase in tastes exposure and knowledge due to education.

It was observed that the ownership of means of transport by household makes them patronize private clinics because distance to their choice of clinics that gives them the utility they want is not barrier. Though the present of hygiene facilities were significant, they exhibited a negative relationship with private clinics patronage i.e the lower and lesser in number of hygiene facilities, the higher the tendency to patronize private clinics for proper check-up.

Though, factors such as age of household head, household size, presence of communication facilities (GSM) and cost of drugs were not significant, they exhibited a negative relationship with the patronage of private clinics in that the older the household head, the less likelihood for him to take decision in patronizing private clinics because older people tend not to seek treatment like younger people who are growing and in the formative years of their lives. Also the higher the number of household size the lesser the patronage of private clinics due to cost. Higher cost of drugs will make households not to visit private clinics who are seen to charge a higher cost for their services

Although severity of illness was not significant, it shows the higher the severity of illness to any members of the household, the higher the tendency to visit private clinics that are believed to have facilities to handle severe illness more than the government hospitals. Some household even fly such members of their household outside the country for better treatment.

It was observed that the significant factors that will make household to patronize chemist rather than government hospitals were age of household head, household size, presence of communication facilities availability of hygiene facilities in the house and cost of transportation and drugs.

The result showed that the younger household head will patronize chemist because of little experience in family management and may not see the need for proper medical attention due to lack of experience and the rush for career development for successful living. Household with small number of members will also patronize chemist because of cost effectiveness. The presence of hygiene facilities such as fridge, flush toilets and piped water makes the hygiene status of household higher and this makes household not to patronize government hospitals but rather chemists in times of mild ailments.

The higher the cost of drugs, the less likelihood of the patronage of government hospital and the higher the tendency to go to was chemists for dispensing because it will be cheaper.

It was observed that the factors that will make households patronize self-care (quacks, religious centers, traditional healers, hawkers, home nurses, and herb sellers) were the number of years of education household head, presence of hygiene facilities and cost of registration for health care needs.

The result showed that the lower the level of education of the household head, the more likely of the patronage of self-care. This is due to the low level of exposure and knowledge of the decision maker in the house. Many other households visit self-care medication due to the diabolical and mystical nature of their illness. High cost of registration will also make the patronage of self-care higher due to the inability of households to afford the cost.

Table 9: Multinomial Logit Regression of a Health Care Provider

	Private	SE	Chemist	SE	Self-care	SE
Constant	(7.2828)	5.9310	6.6094	3.2100	(0.7707)	4.2278
Household Head age	(0.0648)	0.0972	(0.0898)	0.0481	(0.0392)	0.0709
Year of Education	0.8921	0.4148	0.0584	0.1284	(0.4084)	0.2449
Household size	(0.0199)	0.2799	(0.2579)	0.0118	0.1169	0.2096
Fridge	4.3983	2.6834	4.3833	2.4677	(2.4433)	2.0738
Car	3.2739	1.4546	1.9678	1.4229	1.2812	1.6963
GSM	(1.8527)	1.7029	(2.7144)	1.2545	0.8197	1.8455
Flush Toilet	(5.4904)	2.9981	(4.8699)	2.7842	8.9537	4.2687
Transport Cost	0.0220	0.0130	0.0347	0.0114	0.0103	0.0317
Registration	0.0040	0.0113	(0.0030)	0.0086	(0.0408)	0.0200
Drug	(0.0046)	0.0042	(0.0089)	0.0035	(0.0031)	0.0030
Waiting time	(0.0811)	0.0564	(0.0042)	0.0122	(0.0285)	0.0362
Severity of illness	0.1513	0.3561	0.2579	0.2930	0.5473	0.5771

Maximum likelihood Estimate

Conclusion and Policy Recommendation

The paper set out to determine the factors that influence public health care seeking behavior based on the poverty status of the households. Secondary and primary data were collected from a total of 100 households randomly selected from the LGA. With MPCE of ₳7,003, 60% of the household surveyed live below the poverty line while only 40% are non-poor. Results from the Multinomial regression showed that years of education of household head, presence of hygiene facilities (flush toilet and piped water) and registration cost increased the likelihood of households to patronize private clinics. Age of household head, family size, presence of hygiene facilities such as fridge, flush toilet, communication access (GSM), drug and registration cost increased the likelihood of household patronage of chemist. Years of education of household head, registration cost and hygiene facilities will make household patronize self-care. The result further showed that the average spending on health by households is N456.49 while the health subsidy accruing to household from government is N687.98. This shows that health expenses contributed by household are only 40% while that by government is 60%. Benefit incidence analysis shows that 60% of government spending accrued to the poor while only 40% accrued to the non-poor, indicating that government unit subsidy was targeted at the poor but, they still spend more to gain access to the facility. The study showed that

poverty status is not a determining factor for patronage of alternative treatment venues for households.

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