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Healthcare Service Delivery System and Households' Welfare Status in Urban Southwest Nigeria

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ABSTRACT This study examined available health care services in urban southwest Nigeria, the problems inherent in them and households' welfare status. A multistage random sampling technique was used to select 450 respondents comprising households and health care service providers. The results of the data analysis showed that the respondents are young with a mean age of 42 years. Average household size of respondents was 8. However, available health care services in the study area include hospitals/clinics, local doctors, spiritualists, patent medicine stores and self-medicators. The study found that majority of the respondents rely on local doctors, spiritualists, and patent medicine stores for health care. Meanwhile, respondents' age, income, educational level and asset value were positively related to respondents' welfare status but household size, location, primary occupation and gender of respondents were negatively related to it. It is therefore recommended that considerable investment in human capital should be made since education enhances human wellbeing. Also, sensitisation on family planning technique should be intensified because increased household size translates to lowered income per capita which in turn leads to reduced well-being.

INTRODUCTION

Nigeria has been experiencing an accelerated shift of her populations from rural to urban areas especially in recent times. This rapid rate of urbanisation has engendered several challenges and problems similar to situations in other parts of the world. Today's Nigerian city, according to Mabogunje (2002), is typified by substandard and inadequate housing, slums, and lack of infrastructure, transportation problems, low productivity, poverty, crime and juvenile delinquency. Urbanisation, according to him is the root cause of the high rates of environmental degradation, pollution and social delinquency. Nigeria ranks 151st on the Human Development Index of 177 countries worldwide (UNHDR 2004). Harpham and Tanner (1995) and Bradley et al. (1999) in various studies discovered that urban dwellers in less developed countries are exposed to the traditional scourges associated with living in a poor country, such as malnutrition, measles, and malaria; afflictions resulting from newly modernising societies, such as obesity, cancer, and road accidents; and the deterioration of mental health and increased rates of psychiatric disorders and deviant behaviour that are associated with degraded living conditions, overcrowding, and rapid social and cultural change in urban areas. All these health consequences of urbanisation are evident on the Nigerian city today.

Nigeria has been documented as a country having one of the largest stocks of human resources for health (HRH) in Africa: 28 doctors and 170 nurses per 100,000 population. This compares with a sub-Saharan average of 15 doctors and 72 nurses per 100,000 population (Kombe et al. 2007; Abiodun 2010). Despite the large stock of HRH, there are great disparities in health status and access to health care among different population groups in Nigeria. For example, while under-five mortality rate in urban Nigeria is estimated at 153 per 1,000 live births, that of rural Nigeria is 243 per 1,000 live births. Also, there are wide variations in health status and access to care among the six geopolitical zones of the country, with indicators generally worse in the North than in the South. There exits disparity in respect to access to HIV/AIDS and related services and HRH. Prevalence of HIV/AIDS in urban Nigeria is increasing by the day like in most countries in sub-Saharan Africa. Worse still, a child dies every 3 minutes in Nigeria due to poor sanitation (FGN 2004). The use of contaminated water in the midst of unhygienic conditions explains the prevalence of water and sanitation related but preventable diseases. Diarrhoea, which results from poor sanitary/hygienic habits and consumption of water of poor quality, is the second main cause of infant mortality

after malaria and the third main cause of under-five mortality in Nigeria (FGN 2004; Sule et al. 2008).

Also, malaria which is believed to be responsible for school absenteeism and general low productivity in work and farm places is prevalent in about half of the Nigerian population. The prevalence of malaria has direct correlation with poor water and sanitation situation. The resultant effect of inadequate access to healthcare delivery, on sustainable development can best be exemplified by the number of man-hour lost annually to malaria alone. In fact, every year in the developing world 12.2 million children of under-five years die from causes which could be prevented with just a few US cents spent per child (WHO 1998). Meanwhile, poverty has been adduced to be the main reason why babies are not vaccinated, why clean water and sanitation are not provided, why curative drugs and other treatment are unavailable and why mothers die during child birth (WHO 1998). Without adequate care, diseases, which might readily be cured go untreated resulting in frequent deaths. One of the serious effects of poverty, of course, is food and nutrition insecurity and its attendants socioeconomic and political cost. Nutrition security is only achieved when secured access to food is coupled with healthy environment, adequate health services and the knowledge and care needed to secure the good health of all individual in a household (Heidhues et al. 2004).

Increased productivity in any country depends on the health conditions of the labour force. While improved health and quality of life depends to a great extent on the availability and accessibility to health care facilities at affordable cost. The impact of inaccessibility to health care service has affected a number of countries in the developing world. For instance in Nigeria, it has been estimated that the average life span of Nigerians is in the region of forty-seven (47) years. There is therefore no gainsaying the fact that most developing countries of the world and particularly sub-Saharan Africa, faces more series of health problems unlike the developed countries. Africans on the average face lower life expectancies, higher infant mortality rates and a greater risk of disease than people in most other part of the world. Many people in Africa suffer from preventable diseases which are rare or easily treated in the developed countries (WHO 1998). Nutrition security is an outcome of good health, a healthy environment and good caring practices. Poverty is also seen as both symptom and a cause of the water crisis and the United Nations World water report of 2003 stated that water is one of the crises ravaging the world. Africa has the lowest percentage (40 percent) of houses connected to water while all other parts of the world have over 70 percent of houses connected to water supply. In Nigeria, people have to travel several miles to get drinking water which is usually unsafe for drinking (UN World Water Report 2003; Abiodun 2010). Without adequate supplies of clean, safe water and sanitation, people die or suffer from diseases that are spread under unsanitary condition. It is in view of the foregoing that we therefore examine healthcare service delivery system and welfare status of households in urban southwest Nigeria with a view to ascertaining the existing state of things and possibly provide policy prescriptions for improvement in the health conditions of Nigerians.

Theoretical Framework

There are many theories on health care utilization. They include Parson's Sick Role, Mechanic's general theory of help seeking and Suchman's stages of illness and Medical care and Andersen's model of health care utilization among others (Rebhan 2008). However, the paper adopted the Andersen's Health care utilization model. This is because the model has been widely used in literature. The model identifies three categories of factors:

(1) Predisposing Characteristics: They include "demographic, social cultural and attitudinal-belief variables" that cumulatively influence the likelihood of an individual accessing the health system in case of sickness (Andersen and Newman 1973; Rebhan 2008; Reibling and Wendt 2008). The variables exist before the occurrence of any medical condition. Examples of predisposing characteristics are Sex (demographic), education (social cultural) and perceptions about diseases (Reibling and Wendt 2008). An individual that finds health services useful for treatment will utilize these services.

(2) Enabling Characteristics are factors that make sources available to individuals such

as income, insurance coverage and care available within the community. The variables are not individual-based but on the level of family, household or community (Andersen and Newman 1973 cited in Reibling and Wendt 2008).

(3) Need is the ultimate reason for health care utilization and therefore refers to the actual adverse medical condition experienced by an individual and clinically judged severity of this illness.

The aforementioned factors are complemented by characteristics of the health delivery system:

(1) Resources refer to health personnel and material (equipment, building etc.) resources which are available in a health system. The level of availability and distribution of the resources affect accessibility.

(2) Organisation is divided into entry and structure. The factors influencing the "entry" to care are time spent traveling to and waiting time at the healthcare facility (Rebhan 2008). The structure relates to the regulations guiding who treats and how the patient is treated.

The model was updated by Andersen (1995) to capture consumer satisfaction and its effect on health care utilization. Therefore, the model identifies the several health services available and both the type of available services (that is, a hospital, dentist, pharmacy or faith-based clinics) and the purpose of health care service (that is, primary, referral care) will determine the type of service available and utilized (Andersen 1995; Rebhan 2008)

Literature Review

Mafimisebi and Oguntade (2011) carried out a study on Health Infrastructure Inequality and Rural-Urban Utilization of Orthodox and Traditional Medicines in Farming Households of Ekiti State, Nigeria. They found access to health facility in the state was 68.9 percent but was higher in urban areas than rural areas. They also found urban farmers spent more on both traditional and orthodox medicine than rural farmers. According to the study, 91.7 percent of the household heads in the rural areas prefer traditional medicine for the treatment of ailments that are not life-threatening. They reported inadequate access to health care in the study area.

Eneji et al. (2013) carried out a study on health care expenditure, health care status and national productivity in Nigeria. They found health spending in Nigeria is low and as such there is inequality in health care access in Nigeria. They attributed poor health status in Nigeria to poverty and unemployment, poor living conditions, ignorance and poor health behaviours, scarce health resources and infrastructure and low government expenditure on health.

Fetus et al. (2014) investigated the relationship between health capital and poverty reduction in rural Cross River State, Nigeria. They used primary data for the study. They found a positive relationship between health capital variables (health care demand, accessibility and affordability of health care and proportion of household income dedicated to health care) and rural poverty reduction. Fetus et al. (2014) also reported inadequate access to modern health care practitioners and financial problems as constraints to health care service delivery in rural Nigeria.

Adeoti and Awoniyi (2014) analysed demand for health care services and child health status in Nigeria using a control function approach. They found gender of child, mother's educational status, household size and sector impacts significantly on the child health status.

METHODOLOGY

Study Area, Data Sources and Sampling Technique

The study was carried out in southwest Nigeria. Southwest Nigeria is one of the six geopolitical zones of the country and it's the region where one of the major ethnic groups (the *Yorubas*) resides. The southwestern states are: Ekiti, Lagos, Ogun, Ondo, Osun and Oyo. Two states (Ekiti and Oyo) were randomly selected out of the six states in the region. Data were collected through the aid of well-structured questionnaire. Also open discussions, interviews and physical observations were also employed to complement the data for accuracy and reliability. A multistage random sampling method was employed. The first stage involved a selection of two states. The second stage was the selection of local government areas (LGAs). While three LGAs were randomly selected out of the

sixteen LGAs in Ekiti State, six LGAs were selected out of the thirty-three LGAs in Oyo State to make it representative. Thus a total of nine LGAs were selected in the second stage. The third stage involved a selection of one urban town/city from each of the selected LGAs while the fourth stage was a random selection of households based on probability proportionate to size. In all, about 480 questionnaire were administered out of which 450 were used in the analysis. The rest were rejected because of incomplete information and lack of clarity of the responses.

Analytical Technique

In this analysis, descriptive statistics two-third mean consumption expenditure and ordinary least squares (OLS) techniques were employed. While the descriptive statistics (tables, percentages, frequencies, means etc.) were used to describe and summarise respondents' socio-economic variables, available and accessible health care services, regression analysis was employed to ascertain the determinants of respondents' welfare status in the study area. The probit regression analysis (Gujarati 1995) employed was of the form:

$$Y = A + BX_1 + BX_2 + BX_3 + BX_4 + — + BX_{10}) + E_1$$

Y = Welfare status (proxy by poverty level: non-poor = 1, poor = 0 using two-third mean per capita expenditure)

X_1 ……. X_{10} = Independent variables (socio-economic characteristics)

X_1 = Age (years)

X_2 = Gender (male = 1, female = 0)

X_3 = Marital status (married = 1, single, divorced or widowed = 0)

X_4 = Household size

X_5 = Years of formal education

X_6 = Location - distance to nearest health care facility (km)

X_7 = Primary occupation (farming = 1, non-farm = 0)

X_8 = Asset value (Naira)

X_9 = Income of respondent (Naira)

X_{10} = Membership of association (member = 1, non-member = 0)

A = Constant term

B_s = Coefficients

E_1 = error term

RESULTS AND DISCUSSION

Socio-economic Characteristics of Respondents in the Study Area

The result presented in Table 1 shows the distribution of respondents based on their socioeconomic characteristics. It was observed that respondents were still young and in their active working age with a mean of 45 years. Going by gender, there were more males (56 percent) than females (44 percent) and household size of respondents was fairly large with an average of 8 members and this could be attributed to the low level of well-being of the inhabitants of the study area. Thus as household size increases, income per capital declines which invariably lead to reduced wellbeing. About 43 percent of respondents were educated up to tertiary level with about a quarter having no formal education. This

Table 1: Distribution of respondents by socioeconomic characteristics

Variable	*Frequency*	*Percentage (%)*
Age		
<30	79	17.5
31-40	102	22.7
41-50	133	29.6
51-60	74	16.4
>60	62	13.8
Gender		
Male	252	56.0
Female	198	44.0
Marital Status		
Single	89	19.8
Married	248	55.1
Divorced	47	10.4
Widowed	66	14.7
Household Size		
1-3	69	15.3
4-6	135	30.0
7-9	126	28.0
10-12	63	14.0
>13	57	12.7
Educational Status		
No formal education	113	25.1
Primary education	64	14.2
Secondary education	79	17.6
Tertiary education	194	43.1
Primary Occupation		
Farming	102	22.7
Trading	81	18.0
Civil Service	92	20.4
Private salaried job	63	14.0
Artisan	75	16.7
Others	37	8.2
Total	450	100.0

to some extent explains why a sizeable number of respondents patronize local medical practitioners. Also, going by the source of livelihood (primary occupation), the distribution generally revealed the relative importance of farming (agriculture) as the main source of income for most inhabitants of urban Nigeria. This was closely followed by civil service job and this explains why young people in rural Nigeria migrate to city or urban centers in search of while collar or salaried jobs.

Sources of Drinking Water and Toilet Facilities in Use

Respondents' distribution by source of drinking water and toilet facility is shown in Table 2. The result revealed a generally low level of well-being. As indicated, about one-quarter of respondents (28.2 percent) sourced their water from pipe borne while the over one-third (45.1 percent) rely on dug well as the main source of drinking water. In fact, during the dry season, residents of urban Nigeria usually trek several kilometers in search of usable water for domestic purposes and at times resort to fetching water from flowing streams and rivers. Also, the main toilet facility in use was the pit latrine (41.8 percent) and this was closely followed by water closet (22.4 percent) and a sizeable number still rely on surrounding bushes (20.5 percent) especially in new locations where people are just opening up for residential purposes. The result in Table 2 therefore depicts the poor state of hygiene and health situation in most urban areas in Nigeria.

Table 2: Respondents' distribution by source of drinking water and toilet facility

Variable	*Frequency*	*Percentage (%)*
Water Source		
Pipe borne	127	28.2
Borehole	60	13.3
Stream and river	23	5.1
Well	203	45.1
Pipe borne and well	19	4.2
Pipe borne and stream	7	1.6
Pipe borne and borehole	11	2.5
*Toilet Facility*Flush (water closet)	101	22.4
Pit	188	41.8
Bucket	47	10.4
Surrounding bushes	92	20.5
Others	22	4.9
Total	450	100.0

Available and Accessible Health Care Facilities in the Study Area

Available and accessible health care facilities in urban southwest Nigeria as revealed by respondents include hospital/clinic, local/herb doctors, spiritualists, patent medicine stores and self medication. While most of the respondents (40 percent) patronize local or herb merchants, about one-third rely on hospital/clinic. A good number of the respondents consult spiritualists anytime they are ill or indisposed. The distribution generally showed that local/herb merchants were the most patronised in the study area in spite of the increased awareness on the problem associated with the source. This result is consistent with the findings of Abodunrin et al. (2010) and Okumagba (2011). The result is further depicted in Table 3.

Table 3: Distribution of respondents by available and accessible health care facility

Health facility	*Frequency*	*Percentage (%)*
Hospital/Clinic	153	34.0
Local/Herb merchants	180	40.0
Spiritualists (Churches and Mosques)	68	15.1
Patent medicine	36	8.0
Self-medication	13	2.9
Total	450	100.0

Ranking of Reasons for Patronising Health Care Facilities

In order to ascertain the reason(s) for patronising available health care facilities in the study area, responses were ranked and the result is shown in Table 4. From the Table, affordability (65.8 percent) was the main reason for patronising the health facilities and going by the low level of wellbeing as depicted by the large household, a sizeable number of respondents were poor and could not afford going for modern health care services in the hospitals/clinics hence their resolve to patronise local/herb merchants. Following affordability was awareness (23.1 percent) and the least of the reasons adduced for patronage was distance (3.1 percent).

Explaining Determinants of Respondents' Welfare Status

A probit regression analysis was performed on the data to ascertain the determinants of wel-

Table 4: Distribution of respondents by reasons adduced for patronizing health care facilities

Reason	*Frequency*	*Percentage (%)*
Affordability	296	65.8
Trust/Potency	36	8.0
Awareness	104	23.1
Distance	14	3.1
Total	450	100.0

fare status among respondents in the study area. Welfare status was proxy by the poverty status and respondents were categorised into the poor and non-poor using the two-third mean consumption expenditure. Thus respondents whose expenditure was below the two-third mean consumption expenditure of all the respondents were regarded as poor and having a low welfare status while those with expenditure equal to or above the two-third mean consumption expenditure were regarded as non-poor. The result of the probit model revealed that while respondents' age, income, educational level and asset value were positively related to respondents' welfare status those of household size, location, primary occupation and gender of respondents were negatively related to it. This implies that large-sized households with no formal education, low income earners and farmers had low welfare level hence their not patronising modern health care service centres. Also while the coefficients of educational level and location were significant at one percent those of income and household size were significant at 5 percent. The level of significant indirectly explains how important the variables were in influencing the level of well-being of respondents in the study area (Table 5).

Table 5: Probit regression showing determinants of respondents' welfare status

Variable	*Coefficients*
Age	0.2105*
Gender	0.0347
Marital status	0.1569
Household size	-0.2411**
Years of formal education	1.2701***
Location	-0.3824***
Primary occupation	-0.6320*
Asset value	1.2936*
Income	0.1700**
Membership of association	0.1009
Constant term	1.2537

CONCLUSION

The study examined health care service delivery system in urban southwest Nigeria. Analysis of results showed that a sizeable number of respondents still patronise local/herbs merchants and the main reason adduced to the source patronized was affordability. In other words, respondents in urban Nigeria were poor and could not afford modern health care facility. One of the factors responsible for their poor status includes their large household size which affected their income per capita and this invariable led to reduced well-being level.

RECOMMENDATIONS

Going by the findings of the study, the following recommendations were made:

1. Effort should be geared towards capacity building through investment in human capital. This will enhance respondents' welfare status because education enhances the earning potential of people.
2. Sensitisation and awareness on family planning is very important in order to curtail birth rate and population explosion. This is because respondents with few household members were well off and able to afford better and modern health care services.

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