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Utilization of Health-Care and Health Insurance among Rural Households in Irewole Local Government, Osun State, Nigeria

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Abstract: The difficulties often encountered in out-of-pocket financing of health has compelled introduction of pre-paid health insurance in many developing countries. This study assessed rural households access to health facilities and their willingness to pay for the National Health Insurance Scheme (NHIS) that was implemented by the Nigerian government. Data were collected from 102 rural households from some villages using the multi-stage stratified random sampling. The descriptive and Probit regression methods were used. Results show that general ratings of the conditions of health facilities were very poor and awareness about NHIS is very low. Willingness to participate in the scheme is explained by amount able to pay, frequency of illness, workability and coverage of the scheme ($p<0.10$). The study concluded that NHIS will improve access of rural households to quality health services, but issues of awareness and proper design to ensure workability and higher coverage should be considered.

Key words: Health insurance, rural households, health care, NHIS, Osun, Nigeria

INTRODUCTION

The World Health Assembly in 1988 mandated provision of sound health for all people by 2000 as the main target for all governments and the World Health Organization (WHO, 1997). This is because sound health is a fundamental requirement for leading a socially and economically productive life. Up till now, however, many low-income countries have not been able to meet the basic healthcare needs of their people, especially those in the rural areas. In Nigeria, persistently low quality and inadequacy of health services provided in public facilities are some of the problems facing the health sector. Similarly, the state of the Nigerian health system is dysfunctional and grossly under-funded with a per capita expenditure of US$ 9.44 (World Bank, 2005). As a result, Nigeria still has one of the worst health indices in the world and sadly accounts for 10% of the world's maternal deaths in childbirth. The National health management information system is still weak, without an integrated system for disease surveillance, prevention and management. All these are due to the fact that there is a loud disconnect between policy making process, research activities and ownership of research agenda by key stakeholders.

Therefore, the governments have come up with some health reforms, which are targeted at reorganizing the rural health care sector, with a view to enhancing their efficiency in the supply of basic health services. This became more pressing just as it had been realized that sustainable instruments for health financing are urgently needed to reduce high amount of out-of-pocket payments and the incidence of catastrophic health shocks in the developing world (WHO, 2006). Several factors have recently stimulated the development of private insurance mechanisms as a means to finance health care in low-and middle-income countries. These factors include difficulties with traditional ways of health care financing, diversified consumer demand in the course of economic development and intensified trade in the health-services sector, which has introduced foreign insurance providers to developing countries.

Despite numerous efforts to establish functioning healthcare systems, most people in developing countries must rely on direct payments to finance their healthcare needs. In some regions, these out-of-pocket payments can account for up to 80% of total health expenditure. Private prepaid programs, such as community-based health insurance schemes, are often the only possible way for poor people to participate in risk-pooling programs. Evidence so far suggests that private schemes can improve access to health care and offer financial protection even to marginalized groups (Jütting, 2004). Despite the growing importance of Private Health Insurance (PHI), however, surprisingly little is known about its role in national health systems in the developing world (Sekhri and Savedoff, 2005).

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Alternative forms of health care financing and cost-recovering strategies have been heavily criticized, the option of insurance seems to be a promising alternative as it is a possibility to pool risk transferring, unforeseeable healthcare costs, to fixed premiums (Griffin, 1992). Health insurance schemes are increasingly recognized as key factors to finance healthcare provision in low income countries (WHO, 2000). Given the high latent demand from people for good quality healthcare services and the extreme under-utilization of health services in several countries, it has been hoped that social health insurance may improve the access to health care of an acceptable quality.

According to the World Bank (1994), majority of the population in low-income countries remains uncovered against the risk of illness. This is due to the fact that neither purely statutory social health insurance nor commercial insurance schemes alone can significantly contribute to increase coverage rates and thereby access to healthcare. In rural and remote areas, unit transaction cost of contracts is too high, leading often to a state of market failure (Jütting, 2004). Therefore, in a bid to improve the health status of Nigerians, the government under the National Economic Empowerment Development Strategy (NEEDS), has decided to improve physical and financial access to good quality health services and also increase consumers awareness of their health rights and obligations. One of the ways with, which they hope to achieve this, was to develop and implement a comprehensive healthcare financing strategy, including the fast tracking of the National Health Insurance Scheme (NHIS) and to develop and implement a strategy to enhance community participation in providing and financing health services (NPC, 2004).

Thus, the belief of direct public provision of health care services to aid its utilization by Nigerian citizen has been questioned in the recent past. There is now a growing realization that even the poor can make small, periodic contributions that can go towards meeting their healthcare needs. As a result, health insurance is increasingly being recognized as a tool for financing healthcare provision and utilization in low-income countries (Jutting, 2004). The level of awareness of individual households about the scheme, will determine their acceptance of it. Also, the high level of poverty in Nigeria's rural areas is another factor to be considered. Musau (1999) also suggested that persons with health insurance may experience difficulties with financial access if their coverage does not extend to specific services or if deductibles are set at levels beyond their means to pay. Thus, a large number of Nigerian citizens may not be able to afford payment for prepaid health insurance scheme as proposed by the government, even with its many benefits for both providers and buyers. Therefore, the shift towards health insurance is welcomed in principle, but means to achieving optimal public-private sector mix and participation of the intended beneficiaries remain a major challenge.

Thus, as health systems become more complex and costly and as the application of new existing technologies become more refined, making the right decisions about the allocation of often scarce resources has become more difficult. It is essential that the results are reproducible and comparable, for the success of health service provision. This study tried to assess the patterns of healthcare utilization and willingness to take up health insurance of rural households. The specific objectives are to establish households use of healthcare services in relation to their socioeconomic characteristics, to assess households perception of the functionality of the existing healthcare facilities, to determine the level of awareness of households about the national health insurance scheme and to examine the factors responsible for rural households willingness to pay for the proposed National Health Insurance Scheme (NHIS). Findings from the study will assist in devising a more pragmatic method for ensuring successful implementation of the scheme in the rural areas.

MATERIALS AND METHODS

The study area: Irewole Local Government is one of the local governments in Osun state. It is situated in the southwestern part of the state and lies in the rainforest belt of the country with altitudes of between 121.92 and 298.70 m above the sea level. It is located within longitude 4°08'E and latitude 7°07'W 30'N; with a landmass of 978.67 m^2. It has an estimated population of 143,599 with 74120 males and 69479 females, going by the population census of 2006. The old Irewole Local Government with its headquarters in Ikire was created in 1976. In 1989 and 1996 the present Ayedade local government and Isokan local government areas respectively were carved out of the old Irewole area. Irewole local government shares common boundaries with Ayedade local government shares in the East, Ife-North L.G.A. in the southeast and Egbeda local government area of Oyo state in the west.

Data and sampling procedures: The study was based on primary data collected through a well-structured questionnaire. Stratified random sampling technique was used. In the 1st stage, the area of study was zoned according to the number of village within it. Secondly, 11

villages were randomly selected from the villages within the local government area. The 3rd and final stage involves randomly selecting the household to be interviewed. On the whole, a total of 107 households were randomly selected, out of which only 102 were useable.

Methods of data analysis: The analytical techniques used in this study, includes descriptive statistics such as frequencies, means, percentages, bar charts, line graphs, pie charts and tables, used to analyze the socio-economic characteristics of the respondents. Also econometric analysis using Probit regression model was used to estimate the determinants of willingness to pay for the prepaid social health insurance scheme.

The probit model: The Probit model is a log-linear approach used to measure the effects of the independent variables on the dependent variable. The Probit regression analysis, was used since the OLS estimating procedure will be inappropriate as the dependent variable is dichotomous. Probit regression assumes the categories dependent reflects an underlying quantitative variable and it uses the accumulative normal distribution. In this model (Probit), the willingness to pay for the national health insurance scheme will represent the dependent variable (Y). The Probit model was estimated with the assumption that Y, the willingness to pay of rural households for NHIS, is related to the following variables, explicitly stated as:

$$Y_i = \beta o + \beta_1 X_{1i} + \beta_2 X_{2i} + \ldots\ldots\ldots + \beta_n X_{ni} + v_i \quad (1)$$

Y_i = Willingness to pay for NHIS (Willing to pay = 1, 0 otherwise)

$X_{1i}, X_{2i} \ldots X_{ni}$ = vectors of explanatory variable

where:

X_1 = Awareness about the scheme (1 = aware, 0 = otherwise)
X_2 = Primary occupation of household head (1 = farming, 0 = otherwise)
X_3 = Gender of house head (1 = male, 0 = otherwise),
X_4 = Age of the household head (years)
X_5 = Number of years of schooling (years)
X_6 = Family size
X_7 = Total monthly expenditure
X_8 = Frequency of falling ill (often =1, 0 otherwise)
X_9 = Frequency of malaria treatment
X_{10} = Highest amount households are willing to pay
X_{11} = Scheme's workability (it will work = 1, 0 otherwise)
X_{12} = Scheme's coverage (covers all family members = 1, 0 otherwise)
X_{13} = Preference for prepayment

RESULTS AND DISCUSSION

Socioeconomic characteristics of respondents: The average age of the household heads interviewed is 51.40 years, with 4.9% of the house heads being <25 years. Table 1 shows that majority of the household heads (25.5%) were between 40 and 49 years old. Also, 78.4% of the household heads interviewed were male while 21.6% were females. Based on occupation, 22.5% of the household heads were full housewives, 6.9% were farmers, 4.9% were artisans, 1.0% were pensioners, 18.6% were civil servants, 4.9% were drivers and 13.7% were engaged in other businesses. The educational attainments of the respondents reveal that 2.0% have no formal education, 16.7% had primary education, 32.4% attained secondary education, 15.7% had NCE, 8.8% had OND, 7.8% had HND and 15.7% attained University education.

Monthly income and health expenditures of the household heads: The mean monthly income of the households in the study area is ₦32317.24. Table 2 shows that 13.7% of the households sampled had monthly income that fell into the mean monthly household income group, 54.8% had monthly incomes that were below the mean monthly income group, while only 21.6% had monthly incomes that were above the mean monthly income group. Thus, it can be inferred that majority of the households in the study area are not likely to be willing to pay for the National health Insurance scheme. Table 2 also shows that 44.1% of the households in the study area spend less than or up to ₦1000 on health related issues, 41.2% spend between ₦1100 and ₦5000, 10.8% spend between ₦5100 and ₦10000, while only 3.9% spend above ₦10000 on health related issues. The mean monthly expenditure on health related issues is ₦1713.04.

Households perception of the functionality of health facilities and awareness about NHIS: Figure 1 shows the different levels of perception of the households interviewed towards the different types of hospitals in the study area. It shows that for public general hospital, 4.9% perceived it as being fair, 28.4% as being average, 32.4% perceive it as being good, while 8.8% are of the view that it is of excellent quality. Meanwhile, 25.5% were indifferent. The Fig. 1 also shows that a good number of the respondents (48.0%) were indifferent towards the functionality of the mission hospital, while on the average

Table 1: Distributions of household heads according to age

Socio-economic groups	Frequency	(%)
House head age		
20-29	10	9.8
30-39	11	10.8
40-49	26	25.5
50-59	23	22.5
60-69	21	20.6
70-79	11	10.8
Sex		
Male	80	78.4
Female	22	21.6
Primary occupation		
Full housewife	23	22.5
Farmer	7	6.9
Artisan	5	4.9
Technician	1	1.0
Trader	17	16.7
Pensioner	11	10.8
Civil servant	19	18.6
Drivers	5	4.9
Others	14	13.7
Educational groups		
No education	3	2.0
Primary	17	16.7
Secondary	33	32.4
NCE	16	15.7
OND	9	8.8
HND	8	7.8
University	16	15.7

Table 2: Monthly income and health expenditures of the house heads

Income/health Exp.	Groups ₦	Income
No regular income	10	9.8
10000 and below	14	13.7
10001-20000	24	23.5
20001-30000	18	17.6
30001-40000	14	13.7
40001-50000	12	11.8
50001 and above	10	9.8
Health expenditures groups		
1000 and below	45	44.1
1001-5000	42	41.2
5001-10000	11	10.8
>10000	4	3.9

24.5% perceive it as being good, 17.6% of the respondents perceive it as being excellent, while 2.9 and 5.9% perceive it as being poor and on the average respectively. It is also revealed that 37.0% of the respondents were indifferent towards the functionality of the private hospitals, while 3.9% perceive it as being poor, 9.8% as being averagely okay, 26.5% as being good, while 23.5% of the respondents perceive it as being excellent. It was revealed that a good number of the respondents (48.0%) were indifferent towards the functionality of the private maternity centers, while 20.6% perceive it as being good, 9.8% of the respondents perceive it as being excellent, while 1.0 and 16.7% perceive it as being poor and on the average, respectively. Figure 2 shows the distribution of the households with respect to their level of awareness on NHIS, in the study area. It was gathered that only 9.8% were aware; 28.4% of the households were averagely aware; while 47.1% were not aware and 4.9% were indifferent. This implies that the awareness level about NHIS among rural households is quite low.

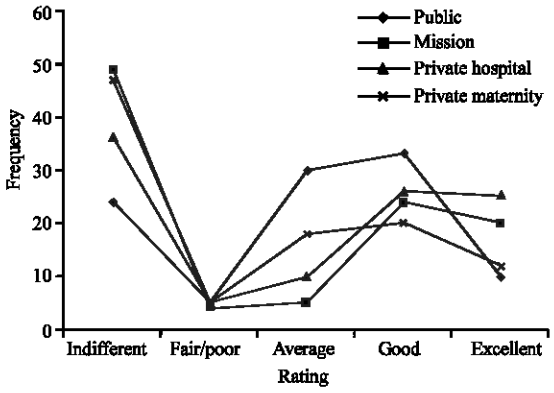

Fig. 1: Rating of health facility functionality across types of service givers

Probit regression of households' willingness to pay: The model produced a good fit for the data because the chi-square (χ^2) value is statistically significant ($p<0.01$). Also, the Pseudo adjusted coefficient of determination reveals that the included variables explained 50.43% of the variations in the values of willingness to pay probability. The variables that show statistical significance are frequency of illness, workability of the scheme, coverage of the scheme and the highest amount that the households are willing to pay. The frequency of illness, the coverage of the scheme and the workability of the scheme are statistically significant at 5% level, while the highest amount that the households can afford for the scheme is significant at 10% level (Table 3).

The significance and the positive relationship between the frequency of illness and households willingness to pay, indicates that the more household members fall ill, the higher the household is willing to pay for better access to healthcare services. In terms of the scheme's coverage, the more the household sees the scheme as covering their entire household members, the more their willingness to pay. Also, the higher their belief in the workability of the scheme, the more the household would be willing to pay for the scheme. The higher the amount the household can afford for the scheme, the more their willingness to pay. The negative relationship between sex of the household heads and households' willingness to pay, indicates that male headed households have significantly lower probability of paying for the scheme.

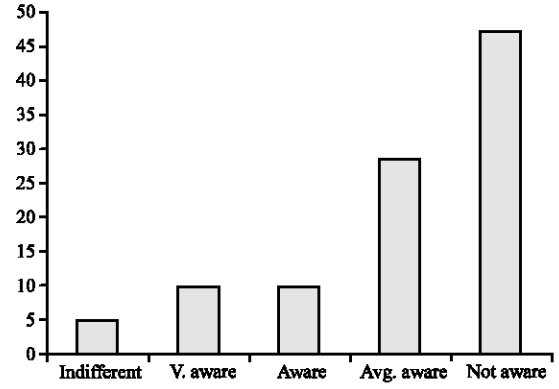

Fig. 2: Distribution of households according to their level of awareness about NHIS

Table 3: Result of Probit analysis of the determinants of households willingness to pay for the National health insurance scheme

Variable	Coefficien t	SE	P>|z|
Level of awareness	0.39760230	0.47807020	0.406
Primary occupation	0.49021880	0.94213380	0.603
Sex of household head	-0.54359640	0.58801380	0.355
Age of household head	-0.02312920	0.03454670	0.122
No. years of schooling	-0.02989840	0.03454670	0.387
Family size	-0.25994200	0.23861050	0.913
Household's expenditure	0.00000809	0.00000670	0.228
Frequency of falling ill	1.42484100	0.56725230	0.012**
Frequency of malaria treatment	0.07771980	0.44595490	0.862
Highest amount willing to pay	0.00395520	0.00216820	0.068***
Scheme's workability	1.16585000	0.46336280	0.012**
Scheme's coverage	1.23803900	0.55916193	0.036**
Preference to prepayment	0.80035670	0.55086280	0.146
Constant	-0.74885620	0.58606740	0.201

Significant at 5%; ***Significant at 10%; Pseudo R^2 = 0.5043; chi-square (χ^2) = 63.18*; Source: Computer printout of data analysis

RECOMMENDATIONS

Based on the findings, the following recommendations are made. Majority of the households in the study area were found to have a considerably large family size. More so most of the households had a per capita income less than the average monthly income and this invariably reduced their willingness to pay for NHIS. Thus, there is a need for an increase in per capita income of households in the study area and this will involve the provision of adequate facilities to equip the people with basic skills required to boost their productive capabilities. Also there should be an introduction of transfer payment programmes and other sustainable income enhancement programmes. These would eventually increase the income that accrues to individual households and also their access to better healthcare services.

In addition, as a way of regulating family size in the future, there is a need for the government to introduce family planning programmes and enlightenment campaigns on the benefits of having smaller family sizes, for an efficient allocation of resources available to the households. This is very important because coverage of all household members by the scheme increases their willingness to pay. It should be noted that with NHIS only covering 5 household members, many rural household members in rural areas cannot be covered.

The government should also improve on their enlightenment campaigns, to raise the level of awareness for the National Health Insurance Scheme in the rural areas. This would effectively enlighten the citizens on the NHIS and also positively affect their willingness to pay for the scheme. Existing health facilities should be equipped and well-managed, rather than build new ones in the same or close locations. This is because the general assessments of the people about the conditions of the hospitals are very poor.

CONCLUSION

Improved access to better healthcare services would improve the healthcare utilization of rural households and their welfare. The National Health Insurance Scheme is a laudable social prepayment programme being implemented by the Federal Government to ensure improved quality equitable distribution of healthcare services with limited cost constraints. In line with the data analyzed and interpreted, it can be reasonably concluded that the willingness to pay for a prepaid social health insurance scheme would improve households healthcare utilization. However, the government should ensure that the proper implementation strategies are put in place to ensure continuity and consistency of the scheme.

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