RELATIONSHIP BETWEEN SOCIO-ECONOMIC STATUS AND OUT-OF-POCKET EXPENSES ON HEALTHCARE IN RURAL NIGERIA

A Case Study By Oluwakemi Tomori Edet-Utan, Nigeria
(MPH, PHD Public Health Student of Texila American University)
Email: tomry2001@yahoo.com

ABSTRACT

The socio-economic status of individuals, households and community play a key role in their health status especially for those in rural areas amongst which the pauper dwells. The fact that out-of-pocket(OOPs)expenses especially amongst the rural poor leads to more poverty/impoverishment, indebtedness and or death calls for strategic and highly efficient health financing measures to resolves issues around OOPs. This study thus, seeks to understand the relationship between the socio-economic status of rural dwellers in Ejigbo LGA and out-of-pocket expenses made on their healthcare.

This cross sectional study was carried out Utilizing an interviewer administered questionnaire to 1280 respondents who were selected using stratified random sampling of respondents in structures and households. SPSS version 21 was used to analyse the data obtained. Level of Educational attainment, income/earnings per month and occupation were scaled and cumulated to obtain the socio-economic scale/status

Majority of respondents belong to the lower socio-economic class, and had up to secondary level education. More than half of the rural dwellers earn between ₦10,000 ($62.5 US). In this study, 64.4% of respondents spent ₦5,000 ($31.25 US) or less on their health through out -of-pocket spending (OOPs) in 3 months consequently about ₦1,666.66 ($10.41 US) in a month.

A statistically significant correlation was found between SES of respondents in rural area and their OOPs on healthcare. An increase in SES revealed an increase in OOPs. A significant relationship was found between the SES of respondents and the OOPs on healthcare which was a reflection of educational status, occupation and income/earnings of community members. This survey also reveals that the poorer the people, the less they spend on their healthcare owing to the fact that they have low earnings/income. Hence, there is need for more efficient risk pooling mechanisms in order to assure equity in healthcare service delivery.

KEYWORDS:- Healthcare, Socio-Economic Class, Education, Statistic, Community, Expenses

INTRODUCTION

Socio-economic stratification is a key parameter for proper understanding of the affordability of community health services, amenities and their purchasing capacity (Shankar and Arlappa, 2013). Understanding the relationship between socio-economic statuses of individuals in rural areas and the amount of out-of-pocket spending (OOPs), gives directions as to premium determination for a proposed community based social health insurance program in rural settings. Currently in Nigeria, health care financing mechanisms include government expenditure on health from revenue collections/taxes, private sector risk pooling/insurance schemes, private out-of-pocket payments for healthcare/user fees and donor-funded health program.

People who benefit more from these private risk pooling mechanisms are majorly employees in the formal sector and organized private sector. The social health insurance scheme in the country only covers individuals and families employed in the formal sector (comprising mainly of people in paid employment in public and private settings), leaving out millions of individuals in the informal sector of the economy ie. Non salary earners like Artisans, Self-employed individual and small scale businesses etc. and these are the main drivers of the economy in rural settings. Further, many rural dwellers are in the informal sector. Community Health Insurance Program is usually aimed at providing equitable and accessible healthcare services to the rural community while discouraging out-of-pocket payments as well as considering affordability of quality healthcare services.

JUSTIFICATION

Though OOPs on healthcare in comparison with socio-economic status have been studied in some countries, there is still paucity of information on this aspect of healthcare financing in the rural areas in Nigeria. Thus, there is need to study and understand the relationship between socio-economic status and trends of OOPs, especially in rural settings in Nigeria. There is paucity of information on how OOPS and other financing mechanisms lead to or have differential effect on various socio-economic classes in healthcare seeking, access to care and utilization of services in Nigeria (Onwujekwe et al, 2010). Equity and efficiency in healthcare remains an issue in Nigeria evidenced by WHO 2000 rankings of countries based on healthcare system performance. Nigeria was ranked at the 187th position out of the 191 countries under consideration in terms of overall efficiency in healthcare system. Therefore, lack of risk pooling mechanism, which contribute to equity issues, need to be addressed.

STUDY OBJECTIVES

The broad objective of this study is to determine the relationship between Socio-economic status of community members and OOPs on healthcare.

THE SPECIFIC OBJECTIVES OF THIS STUDY ARE:

1. To determine the existing health insurance plan of members of the community
2. To describe the socio-economic characteristic of respondents
3. To determine the amount of out-of-pocket spending (OOPs) on their health on a monthly basis
4. To understand the relationship between economic status and rate of out-of-pocket spending on healthcare

RESEARCH QUESTIONS

1. What are the types of health insurance plan community members are enrolled into?
2. What is the socio-economic characteristic of members of selected communities in Ejigbo LGA?
3. How much do community members spend viz out-of-pocket payments on their healthcare monthly?
4. What is the relationship between economic status and rate of out-of-pocket spending on health?

NULL HYPOTHESIS:

There is no significant relationship between Out-of-pocket spending on healthcare and the socio-economic status.

METHODS

SURVEY DESIGN: This was a cross sectional study which utilized validated interviewer-administered questionnaire. Part of this survey was presented earlier in Capstone project 3.

LOCATION: This is a part of a pre- implementation survey conducted prior to the implementation of a community based social health insurance program in rural Southern Nigeria, Osun state, Ejigbo LGA in Dec 2013. 4 communities were selected due to high volume of population density and proximity to the primary healthcare service provider proposed for the program.

SAMPLING TECHNIQUE: Stratified random sampling technique was used

SAMPLE SIZE DETERMINATION:

Minimum sample size computed with model below:

$N=(Z_\alpha + Z_\beta)^2 .P(1-P)/D^2$

$Z_\alpha = 1.96$ (derived from alpha of 0.05)

$Z_\beta = 1.28$ (derived from a power of 90%);

P(1-P) derived from variance with P=0.5

Power of the study (D) is set at 10% which is the minimum difference between those well – disposed to systematic healthcare offered by orthodox scheme and those not disposed.

$N = (1.96 + 1.28)^2 X 0.5(1 – 0.5) / 0.1^2$

$= 10.49X0.25/0.01$

$= 262.25$

Approximately a minimum of 263

Since the study took place in 4 pilot communities with a total of 1280 respondents.

INCLUSION CRITERIA/POPULATION OF INTEREST: **C**ommunity members above 14 years and are not employed into the formal sector but resident in selected community. The category of respondents include, (but not limited to those in this list) Market men/women, farmers, National Union of Road Transport Workers (NURTW), artisan groups (e.g. hairdressers/barbers, tailors, shoemakers, peddlers, confectionary makers, retirees, widows etc, unemployed, part time employment, low cadre in formal sector, companies with less than 10 workers etc as per National Health Insurance Scheme (NHIS) criteria. We ensured that they were all potential enrolees.

EXCLUSION CRITERIA: Respondents below 18 years of age**,** persons with full time employment in a formal sector (federal, State or LGA) were excluded from being interviewed.

INSTRUMENT: Interviewer administered questionnaire with structured and unstructured questions with various sections relating to socio-economic status and OOPs has described in Appendix 1 was utilized for this study.

VALIDITY: Questionnaire was be sent to experts for review and comments which were appropriately effected.

RELIABILITY: The questionnaire that was utilized has been pilot tested in order to check for consistency and repeatability the questionnaire on selected members of the community (the interviewer, etc) who will subsequently be excluded from the main research.

DATA COLLECTION PROCEDURES: The questionnaire shall be reviewed first with the interviewer, followed by identification of the community and systematic random sampling of areas where respondents were located. For those who had challenges with interpreting English

language, the questionnaire was translated and back translated into the local language (Yoruba) and the questionnaire were completed with the help of a guide/interviewer. The data was obtained from respondents by interviewer-administered questionnaire by trained field-research assistants. In order to limit recall bias, respondents were asked to recall expenses made on Healthcare as OOPs only in the last 3 months.

METHOD OF DATA ANALYSIS: Information obtained was collated, examined for completion and coded. Data was imputed and analysed using SPSS version 21. The results include frequency distribution of various responses, means and standard deviation computed for variables requiring levels of measures. Socio-economic status shall be scaled from the cumulative computations of scores assigned to level of education, Income/Earnings and occupation.

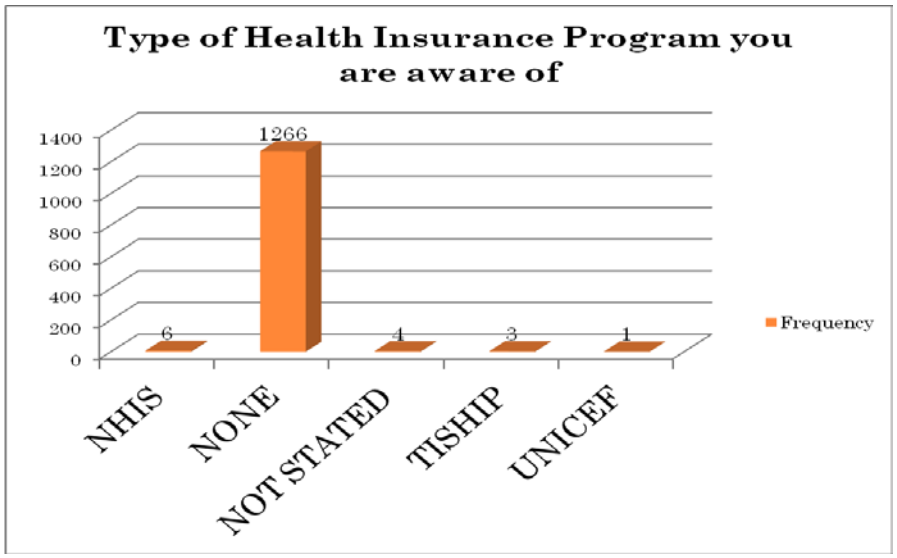
Kuppuswamy's method of Social Classification of an Individual was employed in scaling and determining the Socio-economic status (SES) of individual respondents. Educational level was classified into 8 different classes which include: None, Primary, Junior Secondary, Senior Secondary, Post Secondary, Diploma/NCE, Graduate/HND/NYSC, Post graduate. The Occupations were grouped into 7 categories namely Unemployed, Un-skilled worker, semi skilled worker, skilled worker, clerical/shop owners/trader/farm owner, semi profession/junior civil servant, professional/senior civil servant. Income/earnings per month of the individual were classified in naira as below 10,000; 10,001 – 20,000; 20,001 – 40,000; 40,001 – 60,000; 60,001 – 100,000; above 100,000. Each category was given a score each. The total score for SES computation was equal to 20 points. Then, SES was classified into 5 classes namely: Lower SES (scores of 1-4), Upper lower SES (scores of 5-8), Lower middle SES (scores of 9-12), Upper Middle SES (scores of 13-16) and upper SES (17-20).

ETHICAL CONSIDERATIONS: This survey was of no known harm to the respondents. Only willing persons were interviewed with no undue coercion or duress. Informed Consent was obtained before interviewing respondents and they were treated with dignity and respect. Confidentiality of all information obtained was assured and maintained throughout.

RESULTS

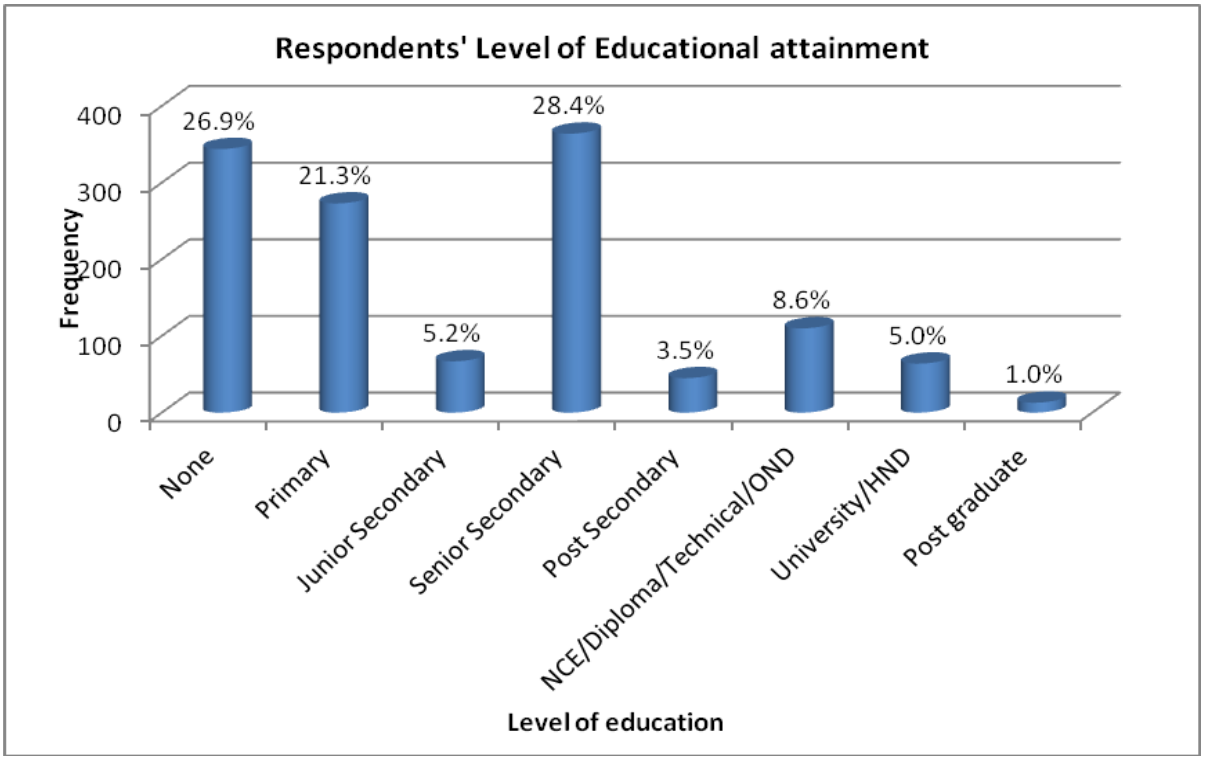
Total number of respondents interviewed with completed questionnaire were 1280, comprising of 643 (51.0%) males and 637 females (49.0%) with age range of between 15 to 90 years.

CHART 1: TYPES OF HEALTH INSURANCE PROGRAM RESPONDENTS ARE AWARE OF



As shown in the chart 1 above, no respondent mentioned community based social health insurance program. Only 3 respondents mentioned TISHIP (Tertiary Institutions Student Health Insurance Plan) while 1266 (98.0%) are not aware of any health insurance plan.

CHART 2: SOCIO-ECONOMIC CHARACTERISTICS OF RESPONDENTS



This survey showed that 26.9% of respondents had no form of education, 21.3% only had primary/basic level of education while 28.4% completed their senior secondary education. In addition, 3.5%, 8.6%, 5.0% and 1.0% had post secondary education, technical/Diploma, University first degree and post graduate degree respectively**.**

CHART 3: OCCUPATIONAL CLASSIFICATION OF RESPONDENTS

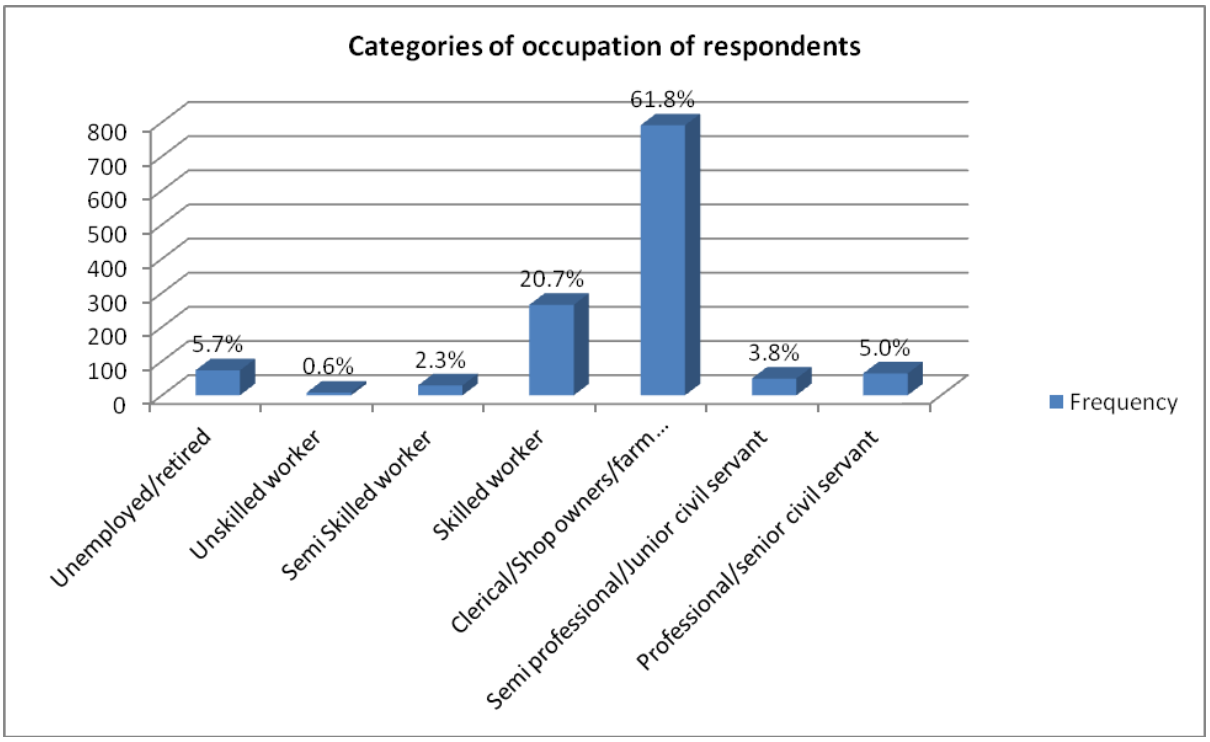
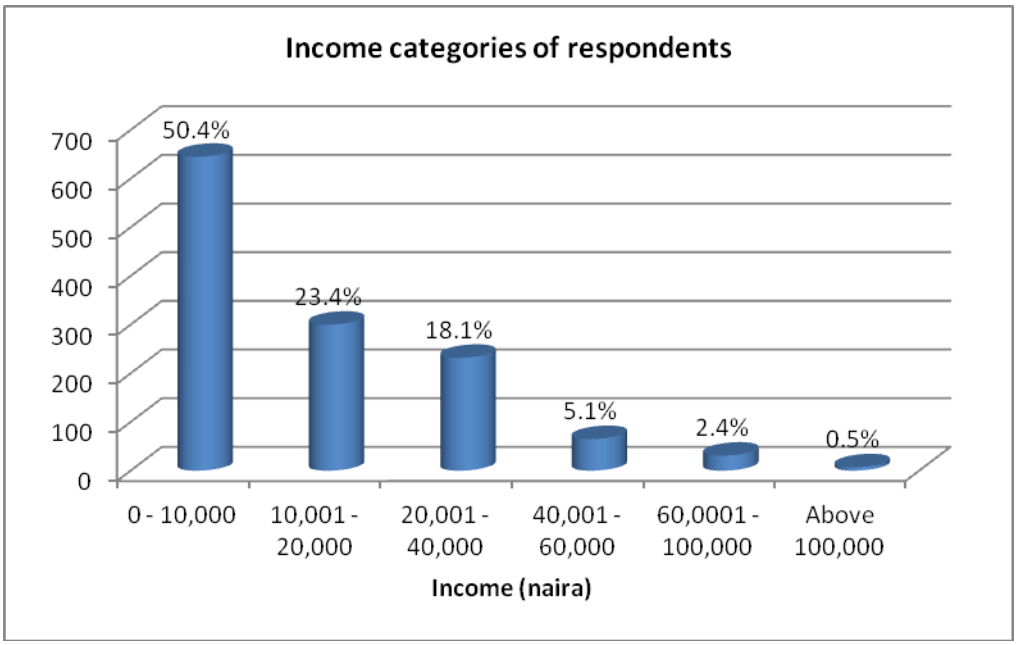


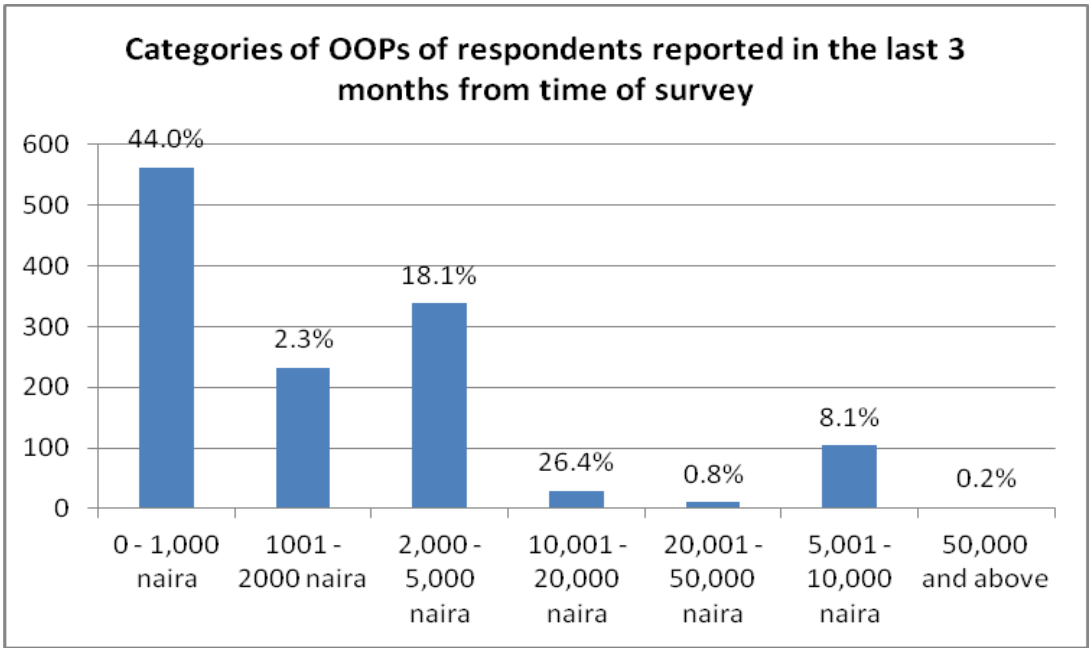
Chart 3 above showed that majority of respondents engage in one form of trading, clerical and farm cultivation. Labourers on the farm were not termed as farmers; rather they were categorized as labourers under unskilled workers. Apprentices were categorized as semi skilled workers. There were some unemployed who still had a form of earning or the other; they were classified as unemployed owing to the fact that, this is not the only factor to be considered in determining socio-economic status.

CHART 4: CATEGORIES OF MONTHLY INCOME/EARNINGS BY RESPONDENTS



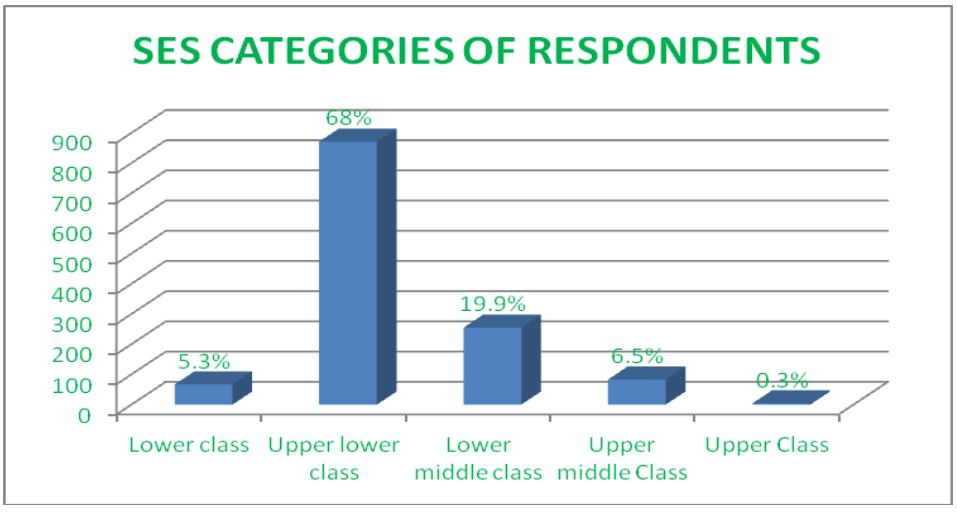
Estimated average monthly income/earnings of respondents was ₦17,754.67 ± ₦19,251 with a range of 0 to ₦200,000; median and modal monthly income/earnings was ₦10,000. It was discovered that majority (50.4%) only earns between 0 and 10,000 naira on a monthly basis. Also 23.4% of the respondents had monthly earnings between 10,001 and 20,000 naira. The remaining few respondents constituted 18.1%, 5.1%, 2.4% and 0.5% in the categories of 20,001 to 40,000 naira, 40,001 to 60,000 naira, 60,001 to 100,000 naira and 100,000 and above respectively.

CHART 5: ESTIMATED MONTHLY OUT-OF-POCKET SPENDING (OOPS) ON HEALTHCARE BY RESPONDENTS IN THE LAST 3 MONTHS.



Minimum amount which respondents reported to have expended via OOPs in the last three months was ₦0.00, maximum amount being ₦135,000; mean OOPs amounts to ₦2,873.88 ± ₦5,748.86; median expenses was at ₦1,750.00.

CHART 6: CATEGORIES OF SES OF RESPONDENTS



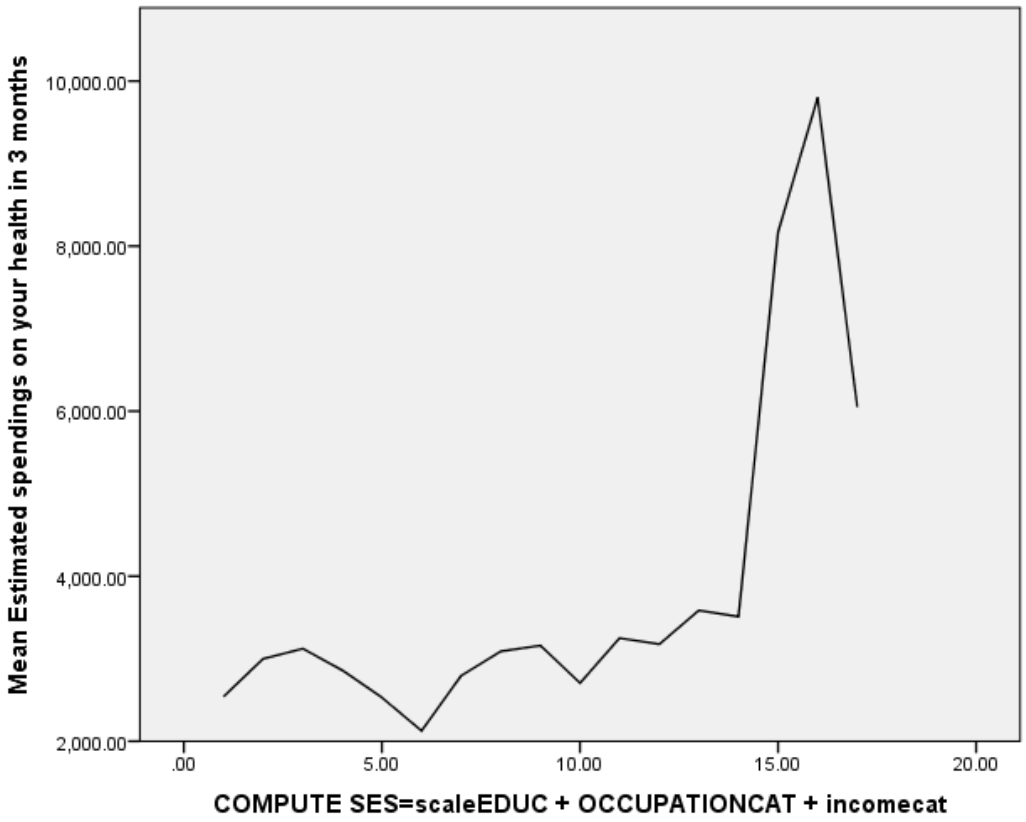
Relationship between socio-economic status and OOPs on healthcare of respondents

After computing the Socio-economic Status (SES) of respondents from their scaled level of education, occupation and income/earnings per month, mean SES was found to be 7.5±2.6, median and modal SES were 7.0 and 6 respectively with minimum score of 1 and maximum of 17 on a scale of 20 scores in total.

The Null hypothesis for testing states that there is no significant relationship between Out-of-pocket spending on healthcare and the socio-economic status.

After subjecting the hypothesis to statistical testing using SPSS v 21, findings from this study showed Spearman's correlation coefficient (r) = 0.6 (p value = 0.0000, i.e $p<0.05$) 2 tailed test, thus, the null hypothesis is rejected and restated thus: there is significant relationship between SES of respondents (in rural area) and OOPs on healthcare. As shown in chart 7 below, as SES increases the OOPs also increased.

CHART 7: RELATIONSHIP BETWEEN SES AND OOPS OF RESPONDENTS IN RURAL NIGERIA, EJIGBO LGA.



DISCUSSIONS

Total number of respondents interviewed with completed questionnaire were 1280 (51.0% and 49.0% males and females respectively) with age range of between 15 to 90 years.

EXISTING HEALTH INSURANCE PLAN OF MEMBERS OF THE COMMUNITY

98% of the community members are neither aware of or have any Health Insurance Plan (HIP).

SOCIO-ECONOMIC CHARACTERISTIC OF RESPONDENTS

26.9% of respondents in the rural area under study had no form of education while majority (54.9%) of respondents only had between primary and secondary level education. This reveals that the rural dwellers are mostly of low literacy level. Many of respondents in the survey community were mostly farm owners, clerical officers, traders and skilled workers including artisans. A chunk (50.4%) of the community members had income of ₦10,000 ($62.5 US). This category of community members who form the bulk of respondents live with about 2 US dollars per day. Another chunk (41.5%) had income ranging from ₦10,000 ($62.5 US) to ₦40,000 ($250 US) per month. This is only a segment of the community who also have dependants who also depend on these monthly earnings. Though, questions about dependants were not asked in this survey, subsequent studies of this nature needs to put this into consideration in order to actually determine the per capita income and SES.

AMOUNT OF OUT-OF-POCKET SPENDING (OOPS) ON THEIR HEALTH

In this study, 64.4% of respondents spent ₦5,000 ($31.25 US) or less on their health through out-of-pocket spending (OOPs) in 3 months consequently about ₦1666.66 ($10.41 US) in a month.

THE RELATIONSHIP BETWEEN ECONOMIC STATUS AND RATE OF OUT-OF-POCKET SPENDING ON HEALTHCARE

Evidently, this survey corroborates many surveys that have been carried out in rural areas. For the purpose of analysis SES was classified into 5 using the Kuppuswamy's Method of Social Classification of an Individual. The five classes under consideration were lower class, upper lower class, lower middle class, upper middle class, upper class. Findings from this study showed that 5.3% belonged to the lower class which is the lowest category of SES class while 68% of the respondents belong to the upper lower socio-economic class with a score of between 5 – 8 points out of 20. In essence, this chunk of respondents, represent the poor in the community.

Hypothesis testing revealed for this study that a significant relationship exist between SES of respondents (in rural area) and OOPs on healthcare. This survey showed that SES increased with the OOPs.

CONCLUSION

In conclusion, a significant relationship was found between the SES of respondents and the OOPs on healthcare which was a reflection of educational status, occupation and income/earnings of community members. This survey also reveals that the poorer the people, the less they spend on their healthcare owing to the fact that they have low earnings/income. Thus, the need for more efficient risk pooling mechanisms in order to assure equity in healthcare service delivery.

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