

HEALTH INSURANCE COVERAGE AND TREATMENT SEEKING BEHAVIOUR OF PEOPLE WORKING IN PORT HARCOURT.

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Abstract

Background: The health sector in Nigeria is struggling, and financing of the health systems is poor with abysmal health indices. A significantly large proportion of Nigerians still pay out-of-pocket for healthcare forcing a large proportion to seek care from cheaper unwholesome sources.

Aim: To assess the influence of health insurance coverage on treatment-seeking behaviour of workers in Port Harcourt.

Materials and Methods: The study was set amongst people who work in the formal sector of Port Harcourt and through stratified random sampling, about 250 respondents were drawn from different strata (fully insured, partially insured, not insured). Data was collected using a structured, self-administered questionnaire and analysed using SPSS version 20.

Results: Almost half of the respondents (46.3%) were within the age range of 35 to 44 years. The male to female ratio was almost 1:1 (52.5%:47.5%). 68.9% of the respondents were married. The Majority (62.7%) had either a BSc OND or NCE. They were almost all Christians (96.8%). 73.0% of the respondents were employees where they work while 9.8% were business owners and 14.8% self-employed. Over 50% had a monthly income of above N100, 000. 73.4% of the fully insured workers and 58.3% of the partially insured workers sought health care from optimal sources (saw a qualified medical doctor) while almost half (46.3%) of the workers without health insurance sought care from unwholesome sources like self-medication, prayer houses and herbs.

Conclusion: The study concluded that there is a significant relationship between health insurance coverage and treatment-seeking behaviour of people who work in Port Harcourt and a worker with a health insurance cover is about two times more likely to seek optimal healthcare from a qualified medical doctor than a worker who is not insured.

Keywords: Health insurance, Treatment-seeking behaviour, Moral hazards.

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INTRODUCTION

Healthcare in Nigeria is currently plagued by a plethora of challenges, foremost of which is poor financing of the healthcare system resulting in the country's poor health indicators. About 3.7% of Nigeria's GDP is spent on health, with health expenditure per capita of \$118.¹ Male life expectancy is 54 years and 58 for females while for both sexes, healthy life expectancy (HALE) is 46 years. Maternal mortality ratio is at 560 deaths per 100, 000 live births

and under 5 mortality rate is at 117 for every 1000 live births.² The World Health Organization placed Nigeria at 187 out of 190 countries in its ranking of the world's health system of the year 2000.³

Several factors have been put forward from studies, as reasons for this poor performance of the health sector. The Nigeria Demographic and Health Survey of 2013 has it that only about 2.5% of Nigerians have health insurance cover, leaving the vast majority paying for healthcare from their pockets.⁴ Out-of-pocket

expenditure as a percentage of total expenditure on health, in Nigeria, stands at 71.7% which is the 5th worst case in the world, better only than countries like Azabaijhan at 72.1%, Cambodia at 74%, Sudan at 75.5% and Yemen at 76.6% (World Bank, 2015).⁵

A large percentage of Nigerians live on less than \$1 per day and because they have to pay for healthcare out of their meagre earnings, majority resort to cheaper, mostly informal and substandard healthcare providers for care.⁶ A study carried out in Owo in Ondo state revealed that 85% of the people resort first to self-medication when they fall ill before considering presenting to a health facility. The main reasons identified for this behaviour were primarily financial constraints while others adopted that behaviour because they considered the ailment to be minor.⁶

A large percentage is known to seek care from quacks in roadside drug shops that are poorly regulated and have no limit to what they can carry out in such places. Yet others resort to traditional healers and spiritual homes.⁶ These patterns of seeking treatment usually result in complications that end up in formal treatment centres with bad outcomes. All of these contribute to the poor health indicators the country currently grapples with.

Poor health care financing has contributed significantly to the decreased patronage of formal healthcare delivery centres because sick people often had to pay from their pockets at the point of service delivery though they are almost always unprepared for this kind of sudden expenditure. Unfortunately, most poor and middle-income earners in Nigeria, do not save for health so sudden health events usually have catastrophic effects on the economy of families.⁷

Many developing countries are currently adopting health insurance for her masses as a way of reducing the spate of high out of pocket payment and the attendant devastating effects it has on the economies of families and indeed the gleam health outcomes. The questions that come to mind are; does health insurance have any effect on their treatment-seeking behaviour? Does insuring them ensure that people seek care from formal settings where they are more likely to assess professional care with significantly better outcomes?

Results of several studies seem to corroborate the above thought line as reported by Tanimola et al in their work “The effects of national health insurance scheme on the utilization of health services at the

University of Ilorin teaching hospital staff clinic, Ilorin, Nigeria”. They highlighted that a study done in Baltimore USA, to see if managed care had any influence in using emergency departments showed that health insurance led to an increase in non-emergency (general outpatient clinics) use of formal health delivery centres.⁸ A similar study in Taiwan showed that the use of prenatal services and patronage of antenatal care centres increased after the introduction of the country’s health insurance scheme with an attendant reduction in maternal mortality indices.⁸

Another study done in Vietnam to determine the factors that influence how people seek healthcare as regards the type of health care provider they seek and the type of care they access concerning their health insurance status revealed that insured patients are more likely to use optimal healthcare providers and this trend is commoner among the low-income earners.⁹

Health insurance has the ability to pool funds thereby making funds available for essential public health services and provide financial protection for the poor and vulnerable in society.⁹ There is substantial evidence that relying on out-of-pocket payment alone can negatively affect treatment-seeking behaviour. Also, in many cases, direct charge for health services lead to lower consumption of essential health care services amongst high need groups and they resort to self-treatment and other low-cost health services provided by unregulated providers.⁹

This study seeks to determine how the insurance status of those insured has influenced their patterns of seeking care. Not so many studies have been done on the patterns of behaviour change that follows health insurance coverage. The topic largely falls within the moral hazards’ framework. Moral hazard is said to occur when there is a change in behaviour before or after an outcome whose cost has been taken by another.¹⁰ Behaviour change before the outcome in this case health, as in taking more health risks because someone else will bear the cost refers to ex-ante moral hazard while a change in behaviour after the outcome refers to ex-post moral hazard.

From the studies seen above, the trend generally points towards increased use of healthcare facilities following insurance coverage but the concern that follows is that do people tend to over-utilize since they no longer directly bare the cost – ex-post moral hazard? Generally, we may not dwell much upon this thought seeing that Nigeria being an underdeveloped

country already has a high rate of unmet health needs so any measure that has the potential of increasing utilisation of formal healthcare facilities, should be well received.

Amongst other challenges that may have resulted in this poor health indicators for Nigeria, this study is particularly interested in health care financing and health insurance in particular and how it influences treatment-seeking behaviour of people working in Port Harcourt.

The study to determine the extent to which health insurance coverage influences treatment-seeking behaviour of people working in Port Harcourt.

The devastating effects of out-of-pocket payment on households of resource-poor countries are driving the increasing appeal of a system of pooling funds to meet their health care needs. More and more countries are adopting Health Insurance either in form of social health insurance or private health insurance as a way of cushioning the burden of financing health care for their populace.¹¹

Health insurance is essentially a system where people “pay into a pool when they are healthy and draw funds from the pool when they are sick”. It has been referred to, in some quarters as a system of health financing where the “healthy pays for the sick”.¹²

The Health Insurance Association of America (HIAA) defined Health Insurance as “coverage that provides for the payments of benefits as a result of sickness or injury. It includes insurance for losses from accidents, medical expenses, disability, or accidental death and dismemberment”

A health insurance policy is a contract between an insurance provider (e.g an insurance company or a government) and an individual or his/her sponsor (e.g an employer or a community organisation). The contract can be renewable (e.g annually, monthly) or lifelong in the case of private insurance, or be mandatory for all citizens in the case of national plans. The type and amount of health care cost that will be covered by the insurance provider are usually specified in writing, in a member contract or “Evidence of Coverage” booklet for private insurance, or national health policy for public insurance.¹³

Several pieces of literature in health economics suggest that the price elasticity of demand for health services is higher in lower-income individuals (meaning a small change in price will result in a large change in quantity of healthcare services demanded);

if this statement holds, it should then follow that insurance coverage should lead to increased utilisation of formal healthcare providers a phenomenon that is highly needed in low-income countries to encourage her populace to utilise more of formal health care facilities.¹⁴

Health insurance generally assumes two forms, either it is social health insurance also referred to as public/national insurance or it is private health insurance. The differentiating criterion is in how it is funded.¹⁵ Ultimately, all money comes from household income, coordinated by the government, in public insurance, through social insurance taxation, while for private insurance, all monies are paid to the risk pooling entity

On the other hand, treatment-seeking behaviour is a subset of the broader concept of health-seeking behaviour which in itself is approached in two ways as identified by Tipping and Segall.¹⁶ Healthcare seeking behaviour focuses on the endpoint of the utilisation of formal health care facilities as opposed to self-treatment, use of traditional medicine and patronage of quacks. The second is health-seeking behaviour which refers to the whole process involved in illness response.

Treatment seeking behaviour which can also be referred to as Health care-seeking behaviour has been defined as any set of actions undertaken by an individual who perceives a health problem or an illness state, for the purpose of finding an appropriate remedy.¹⁷

Health seeking behaviour is generally considered to be a concept that has not been theorised enough but has somewhat been over utilised.¹⁸ Most available studies on treatment-seeking behaviour tend to focus on the individual as a purposive being that can determine his responses regarding health. They fail to recognize the interwoven nature of interdependent factors that ultimately influence health-seeking behaviour.¹⁹

A good understanding of treatment-seeking behaviour will lead to elimination or at least a reduction in the delays in accessing quality health care services when needed. Studies have revealed that for every one person that visits the hospital, nine persons seek alternative care including self-medication.²⁰

MATERIALS AND METHODS

This is a cross-sectional, causal-comparative research with a nomothetic approach, involving the use of

questionnaires to study the influence of health insurance coverage on the patterns of treatment-seeking behaviour of people working in Port Harcourt. The study was carried out among those who work in the formal sector because the way the health insurance system in Nigeria is currently structured, only the organised private sector and government agencies have subscribed, and that to various degrees; partial of full insurance cover.

The study population comprised of adults who have jobs and work within Port Harcourt metropolis. The inclusion criteria include adults who have paid employment within Port Harcourt metropolis that has been sick in the last 6 months and sought one form of treatment or the other. The exclusion criteria include informal workers, self-employed people.

This study employed a two-stage sampling method with the first stage involving a stratified random sampling that placed the companies in Port Harcourt into three strata; fully insured, partially insured, uninsured, then randomly selecting five companies from each stratum. The second stage involves a simple random sampling to pick the number of respondents from each company equal to the estimated minimum sample size.

The list of functional companies in Port Harcourt was obtained from the Rivers State Board of Internal Revenue and that of companies with Insurance was obtained from the NHIS Office in Port Harcourt. These lists constituted the sampling frame from which samples were drawn.

The number of respondents was proportionately allocated to each company based on their staff strength. The staff list of the company was retrieved and numbered as our sampling frame from which respondents were randomly selected.

Data were analysed using SPSS version 20. The socio-demographic characteristics of the respondents were outlined in frequencies and proportions and presented in tables and charts as appropriate. The total respondents were then categorised into fully insured, partially insured and not insured.

The socio-demographics were then analysed against health insurance status (fully insured, partially insured and not insured) to see if there were any variations and the variations were tested for strength of association using Fisher's exact test and Chi-square as appropriate.

The treatment-seeking behaviour of respondents was then assessed first with frequencies and proportions of those that went for treatment when sick and specifically where they went to access care.

Treatment seeking behaviour was then grouped into optimal and not optimal based on those that saw a Medical doctor first when they were sick. The patterns of treatment-seeking behaviour of those that were fully insured, partially insured and not insured were then presented with pie charts.

The strength of association between the various socio-demographic factors and the optimality of their treatment-seeking behaviour was tested using Chi-square. A P value of less than 0.05 was considered significant. Statistically significant variables on bivariate analysis were entered into multivariate regression analysis model to adjust for any confounding influences.

Multivariate analysis was performed using Logistics regression analysis. The dependent variable was treatment-seeking behaviour (categorized as optimal/not optimal) while the independent variables were health Insurance status (insured/not insured) and sociodemographic variables.

Odds ratio and 95% confidence interval were completed to measure the strength of association.

RESULTS

Table 1: Distribution of respondents by socio-demographic and health insurance status

Socio-demographics	Health insurance status			Total n (%)
	Fully insured n (%)	Partially insured n (%)	Not insured n (%)	
Age (N = 238)				
18 – 24 years	0 (0.0)	1 (33.3)	2 (66.7)	3 (100.0)
25 – 34 years	32 (34.8)	16 (17.4)	44 (47.8)	92 (100.0)
35 – 44 years	27 (23.9)	42 (37.2)	44 (38.9)	113 (100.0)
45 – 54 years	2 (8.3)	13 (54.2)	9 (37.5)	24 (100.0)
55 – 64 years	0 (0.0)	0 (0.0)	3 (100.0)	3 (100.0)
	Fisher’s exact p value = 0.002*			
Gender (N = 244)				
Male	40 (31.2)	39 (30.5)	49 (38.3)	128 (100.0)
Female	24 (20.7)	33 (28.4)	59 (50.9)	116 (100.0)
	Chi Square = 4.847; p value = 0.089			
Marital status (N = 239)				
Single	14 (21.5)	14 (21.5)	37 (56.9)	65 (100.0)
Married	49 (29.2)	55 (32.7)	64 (38.1)	168 (100.0)
Separated/Divorce	0 (0.0)	1 (16.7)	5 (83.3)	6 (100.0)
	Fisher’s exact test = 10.853; p value = 0.028*			
Educational level (N = 241)				
Primary	0 (0.0)	1 (20.0)	4 (80.0)	5 (100.0)
Secondary	2 (18.2)	6 (54.5)	3 (27.3)	11 (100.0)
BSc/OND/NCE	37 (24.2)	50 (32.7)	66 (43.1)	153 (100.0)
Masters	23 (33.3)	12 (17.4)	34 (49.3)	69 (100.0)
PhD	0 (0.0)	3 (100.0)	0 (0.0)	3 (100.0)
	Fisher’s exact test = 16.216; p value = 0.015*			
Religion (N = 243)				
Christian	63 (26.7)	67 (28.4)	106 (44.9)	236 (100.0)
Islam	0 (0.0)	3 (100.0)	0 (0.0)	3 (100.0)
Traditionalist	1 (33.3)	1 (33.3)	1 (33.3)	3 (100.0)
None	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
	Fisher’s exact test = 6.951; p value = 0.150			

*Statistically significant

Distribution of respondents by socio-demographic and health insurance status continued

Socio-demographics	Health insurance status			Total n (%)
	Fully insured n (%)	Partially insured n (%)	Not insured n (%)	
Occupation (N = 242)				
Business	3 (12.5)	2 (8.3)	19 (79.2)	24 (100.0)
Employee	53 (29.8)	67 (37.6)	58 (32.6)	178 (100.0)
House holder	0 (0.0)	1 (25.0)	3 (75.0)	4 (100.0)
Self-employed	7 (19.4)	2 (5.6)	27 (75.0)	36 (100.0)
	Fisher’s exact test = 39.647; p value = 0.0001*			
Income (N = 236)				
<50,000	7 (17.5)	10 (25.0)	23 (57.5)	40 (100.0)
50,000 – 100,000	8 (16.3)	17 (34.7)	24 (49.0)	49 (100.0)
100,000 – 200,000	12 (16.7)	38 (52.8)	22 (30.6)	72 (100.0)
200,000 – 500,000	22 (43.1)	4 (7.8)	25 (49.0)	51 (100.0)
>500,000	13 (54.2)	2 (8.3)	9 (37.5)	24 (100.0)
	Chi Square = 48.800; p value = 0.0001*			

*Statistically significant.

Table 1 shows the socio-demographic features of the respondents as it relates to their health insurance status. From the table it is seen that majority (34.8%) of those that had full health insurance cover were within the age range of 25 to 34years while majority (54.2%) of those that had partial insurance were within the age range of 45 to 54years and most of the uninsured (66.7%) were less than 24 years old. This difference in the proportion of age as it relates to health insurance status is statistically significant.

While such differences in marital status, educational level, occupation and income as they relate to health insurance status had statistical significance, gender and religion were of no statistical significance.

The above table shows that an overwhelming majority (about 94%) of the respondents actually sought health care when they were sick and a higher percentage of those that were partially insured sought health care as compared to the uninsured which was even higher than the fully insured.

Table 2: Distribution of first place to seek treatment among all the respondents (N=244)

Treatment seeking behaviour	N	%
Chemist/Pharmacy without prescription	29	11.9
Chemist/Pharmacy after getting prescription from a doctor friend	36	14.8
Took drugs already had at home	10	4.1
I went for prayers	1	0.4
I went to see a doctor at a government hospital	32	13.1
I went to run a test at a laboratory	24	9.8
I went to see a doctor at a private hospital	107	43.9
I went to get herbs	2	0.8
Ns	3	1.2

Ns – Not specified

This table shows the general treatment-seeking behaviour of all the respondents as regards the place they go for treatment when they fall sick. Almost half of them (about 44%) of them go to a private hospital to see a doctor. About 27% of all the respondents go to a chemist/Pharmacy to procure drugs. Less than 1% goes for prayers or use herbs.

The study also revealed that about 74% of those that had full health insurance coverage sought care optimally (i.e they saw a Medical Doctor for treatment). Similarly, above half of the partially insured (58.3%) sought care optimally. For the uninsured however, less than half (46.3%) sought care from a qualified medical doctor.

Table 3: Association between health insurance status and level of treatment-seeking behaviour among the respondents

Health insurance status	Level of treatment-seeking behaviour		
	Optimal n (%)	Not optimal n (%)	Total n (%)
Insured (fully/partially)	89 (65.4)	47 (34.6)	136 (100.0)
Not insured	50 (46.3)	58 (53.7)	108 (100.0)
Total	139 (57.0)	105 (43.0)	244 (100.0)

Chi-Square = 9.000; p-value = 0.003*; Odds ratio (95% CI) = 2.2 (1.31 – 3.69);*

This table tests the strength of association between Health Insurance status as the independent variable and treatment-seeking behaviour as the dependent variable. It is seen that the relationship is statistically significant with p-value of 0.003 and an Odds ratio of 2.2.

DISCUSSION

This study sought to determine the influence of health insurance coverage on treatment-seeking behaviour of people working in Port Harcourt. About twenty-four per cent of our respondents were fully insured. One would expect that since they don't pay directly out of pocket for health care, there should be little or no delay in their seeking care when sick but the results of this study show otherwise. Almost ten per cent (9.7%) of the fully insured respondents didn't seek any care at all when they were last sick. This figure was higher than for partially insured (4.2%) and for those who pay out of pocket (5.6%). This finding contradicts the fear of ex-post moral hazards by insurance companies who assume that being insured automatically increases the speed of visit to the hospital because enrollees do not pay out-of-pocket.⁹ On the other hand, this apparent delay in the fully insured seeking healthcare could be as a result of their perception of the seriousness of the problem which can be explained by the Anderson-Newman framework of health service utilization or the health belief model.^{21,22}

The results also show that about 74% of the fully insured who sought treatment did so from optimal

sources (saw a medical Doctor either from a public hospital or from a private hospital). This finding is in keeping with studies done in Baltimore USA where they found that health insurance coverage led to increased visits to outpatient clinics and utilization of health facilities. Similarly, a study in Taiwan showed that utilisation of formal health care facilities increased after the introduction of health insurance.

Almost 96% of workers who had partial insurance (they pay a percentage at every visit to the clinic) sought care when they were ill. This figure was higher than those who were fully insured and those who pay out of pocket. Though at this point, it wasn't clear the kind of treatment they sought, it is worth noting they sought treatment the most. Some health insurance companies introduce co-payment as a measure to discourage over utilisation. This policy had been based on the assumption that if people are made to pay a part of the bills on every visit, it'll reduce the frequency of visit. Evidence from this study shows otherwise that partial insurance did not necessarily reduce the frequency of use. More study will be required to know the exact percentage of co-payment (partial insurance) that will encourage or discourage the frequency of visit.

A higher proportion (about 59%) of them sought optimal care as compared to 41% who sought care that was not optimal. The percentage of optimal care seekers was higher than those without insurance further agreeing with previous studies cited above.

The results of this study showed that a high percentage (about 95%) of workers who were not

health insured still sought treatment when they were ill. This figure was slightly lower than those that were partially insured but higher than those that were fully insured.

Compared to those that were insured, the uninsured sought care least from optimal sources as almost half (46.3%) of them sought care from sources like roadside drug stores, self-medication, herbs or prayer houses. According to World Bank reports, about 72% of Nigerians still pay out of pocket for healthcare meaning they don't have any insurance cover and are therefore exposed to financial catastrophe. One can infer from the results of this study that almost half of that number seek healthcare from unwholesome places and this could contribute to the poor health indices of the country.

The study was however limited in the fact that it was conducted only among people that work in the formal sector of the economy and therefore cannot be generalised for the whole population. Also, the study was subject to social desirability bias as respondents may not want to be associated with the use of those other sources of health care. This was mitigated by a strong emphasis on anonymity.

There will be a need for a further study involving the informal sector and other segments of society to enhance the generalisability of the findings. Also, to determine the influence of various extents of partial insurance on treatment-seeking behaviour.

CONCLUSION

A significant proportion of workers who pay out of pocket sought treatment when they were sick but almost half of them sought care from unwholesome sources. Therefore, will expectedly be exposed to poor health outcomes.

The study revealed a significant relationship between health insurance coverage and treatment-seeking behaviour of people who work in Port Harcourt and a worker with a health insurance cover is about two times more likely to see a trained medical doctor than a worker who is not insured.

CONSENT

Informed consent was sought from all the respondents who participated in the study.

ETHICAL APPROVAL

Ethical approval to conduct the study was obtained from the University of Port Harcourt Business school ethical committee.

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The research was funded by the authors.

CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest.

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