NHIS-HMO Enrollees' Assessment of Quality of Illness Treatment during Visit to Selected Hospitals in South-West, Nigeria

Abigail Affiong Mkperedem[1*], Peter B Ogunlade[1], Chisaa O Igbolekwu[1], Ogadimma Arisukwu[1], Abiodun Olawale Afolabi[2]

[1]Department of Sociology, Landmark University, Omu-Aran, Nigeria; [2]Department of Agricultural Economics, Landmark University, Omu-Aran, Nigeria

ABSTRACT

The National Health Insurance Scheme (NHIS) and its implementation through the Health Maintenance Organizations (HMOs) is a representation of the Nigerian government attempt in ensuring quality health services are offered to all Nigerians. Yet, anecdotal evidences shows that quality of illness treatment rendered at hospitals is perceived to be low, very low or average among NHIS-HMO enrollees. Using simple random and convenient sampling technique across 9 healthcare facilities in 3 local government areas in Lagos, Nigeria, the study triangulated using survey method and In-Depth Interview (IDI) to elicit data from selected respondents. The results showed that while enrollees' were positive to statement pertaining to the medical consultant (doctor) mannerism, explanation and examination, significant numbers were not subjected to comprehensive tests and examinations were not promptly carried out. Health plans of enrollees' were observed to have effect on the quality of service (treatment) accessed. IDI revealed that enrollees succumb to Out Of Pocket payments (OOP) at the Health Care Facilities (HCFs) for services considered higher in quality compared to the ones covered by the scheme. As such the study recommends that government should take appropriate measures including pro-active inspectorate division to ensure that accredited Health Care Providers (HCPs) deliver evidence-based services in ensuring the desired healthcare result is achieved.

Keywords: Quality assessment; National health insurance scheme; Health maintenance organization; Illness treatment; Hospitals; Social construction theory

INTRODUCTION

Healthcare quality service is the degree to which existing technical expertise used in medical care improves the probability of the health desired consequences of the patient [1]. Technical components of quality in healthcare concerns itself with the efficacy of treatment in achieving measurable health benefit and the interpersonal component is related to satisfaction dimension which is concerned with the degree to which the patient desires and expectations are met [2].

The sociologist notions of health are shaped by individual's socio-cultural background. This implies that sickness is a social implication of illness, people tend to characterise illness as those things which affects their normal day to day lifestyle as well as a disruption in their daily routine. Such individuals experiencing any form of illness are expected to take up a sick role in the bid to get well [3]. Sick role is based on Parsonian value consensus, involving a shared value of what is normal and expected within a society. Anything contrary is regarded abnormal or deviant. Although, Parson supposed the act of being sick could not have been an intentional choice by the sick person, he also noted that such an individual is required to take up certain responsibilities expected of the sick. Such expected roles are pattern of behaviors considered fitting for individuals with illness and or a collection of societal standards describing what behavior is acceptable and unacceptable for people with a disease or a health condition.

To Parsons, while diseases are biological, sickness is socially defined in interaction; therefore, he argues that illness must be regulated socially for fear that it may weaken the functionality of the society. In Parsons' view, provision of medical treatment is a form of social sanction to be used in order to ensure sick individuals do not get engrossed with sick role but comply to social norms. This process requires social agencies as well as healthcare sector's intervention in ensuring the deviant behaviour (illness) is controlled.

The Nigerian National Health Insurance Scheme (NHIS) is a government initiative aiming towards ensuring all citizens healthcare needs are provided for at a reasonable cost in order to achieve not just the World Health Organization's definition of health which goes beyond the absence of disease but includes the physical, mental and social indices thereby constricting the deviant behaviour of illness among individuals. The NHIS scheme which involves donations dependent on means, use and need did not commence in Nigeria till 2005 although the concept was initiated far back in 1962 [4]. Real enabling legislative proclamation came in the 1999 constitution Decree 35 [5]. It is mandatory in organizations with employee capacity of ten upward to set aside five percent from each employee's basic earnings and ten percent from the employer per employee as contributions for health care needs into the NHIS scheme purse [6].

Several researchers have carried out studies in Nigeria on increasing consciousness, work and modus operandi of the National Health Insurance Scheme as well as the Health Maintenance Organisation [7-10]. In its NHIS strategic review, judged health services offered to be insufficient when it comes to meeting public health demands, as reflected by the populations poor health status. As noted by, ill-timed treatment dispensation increases the rate of trivial illnesses to complicated ailments. Therefore, it is reasonable to assert that most deaths and illnesses that the people suffer from is not a function of major infectious diseases outbreak but a resultant effect of untimely and improper treatment to diseases that could be prevented without sophisticated medical technologies [11,12]. Consequently, this research work is aimed at enhancing established data on the quality of healthcare services in the area of illness treatment provided to NHIS-HMO enrolled in accredited Healthcare Facilities (HCFs) in Lagos, Nigeria.

LITERATURE REVIEW

Quality of illness treatment through the SEVQUAL model

At the outset the model was based on ten dimensions of service quality later it was reduced to five standard of service dimensions, including: tangible (physical facilities, equipment and staff appearance), reliability (accurate and consistent service performance), responsiveness (willingness to assist customers and prompt service delivery), empathy (personalised care and individual interest provided to healthcare users, including accessibility and considerate level of consumer awareness) and assurance (providers' courteousness, know how in order to build loyalty and the capability to communicate hope) [13-15].

Quality of illness treatment through the gap model

Five differences that could have adverse effects on consumers understanding of service quality [16].

Gap 1 occurs when there is differences between what the Healthcare Providers (HCPs) assume their consumers need and what the consumer actually wants. For example, HCPs may assume better canteen is what the consumer's need, while the consumer actually wants more empathy from the Community Extension Worker (CHEW).

Gap 2 occurs between provider's perception and service specification. There is a supposition that due to difficulty in standardizing healthcare services, HCFs is unable to consistently provide expected services even though, they can correctly perceive it.

Gap 3 occurs between service precise condition and service delivery quality. HCFs being is aware of the enrollees' actual expectation, establishes the necessary quality design yet, the service is poorly delivered in performance output.

Gap 4 is the differences between what is actually provided by the HCF as against what was told the consumers at the point of advertisement. Discontentment in service may arise when the actual quality is low compared to the acclaimed at the point of enrolment. For example, the declaration of health service accessibility by the HCFs/HCPs automatically leads the healthcare consumer to expect aptness when accessing care. noted that where enrollees do not have such accessibility fulfillment upon visit to the HCFs/HCPs, they lose trust in the capability of the HCF thereafter [17].

Gap 5 occurs when there are differences between the services received and the service expected. Perception is created at this point as this difference could either be positive or negative [18].

Theoretical framework

Social construction of illness: Social constructionism assumes the concept of reality and knowledge is a result of social dynamics created by persons or group members. In the last fifty years of advancement in this theory, a detailed outline for understanding the key discoveries has been summarised into three subheadings; the cultural meaning of illness, the social construction of the illness experience and the social construction of medical knowledge [19]. To them, it is the cultural norms not the biological inferences that decides which illness is stigmatized, labelled as a disability or even considered issuable (meaning the nature of a certain condition could be disputed by certain medical professionals) compare to conclusive conditions (illnesses which are incontestably in the health system). This underlying force can influence enrollees care seeking behaviour and the treatment provided by healthcare professionals.

The construction of illness is centred on the ideology which regards reality as a faction socially constructed by individuals. This ideology showcases how the healthcare system is socially constructed; in that, treatment pattern could reveal as well as replicate socio-economic, class and ethnic inequality.

The connection between this research work and the social construction theory is illustrated by to be dependent on the priorities, beliefs, histories and the position of the group involved; the structural disposition including the time, location and monetary capacity of the healthcare facility; and both professional and political impact on how illness and pain meanings are interpreted, conveyed and reconstructed [20].

The study approach effectively triangulates in its methodology, therefore quantitative data was elicited through questionnaires and qualitative data was gathered through In-Depth Interviews (IDIs). The population consists of NHIS and HMO enrollees aged 18 to 65 years who attend public and private hospitals in the Lagos senatorial districts of Eti-Osa, Ikeja and Ibeju-Lekki. St. Mary specialist hospital, Awoyaya hospital, Blue cross hospital, Unity hospital, The Eko hospital, General hospital akodo, Budo specialist hospital, Etta Atlantic memorial hospital and St. Nicholas hospital were among the accredited public and private HCFs. The public and private HCPs were chosen to represent Nigeria's two dominant healthcare facility systems [21].

The study participants were chosen using a multistage selection strategy. To eliminate selection bias, we used simple random sampling at each stage. The first stage entailed grouping the twenty local governments into three senatorial districts, with only one local government from each district being chosen by ballot. The second stage entailed compiling a list of all registered HCPs within local governments and categorizing them as either private or government run. At this point, the convenience approach was utilized to select three HCFs that are NHIS accredited to deliver primary, secondary or tertiary services in the study.

The sample size of 240 enrollee responses was computed using

factor analyses of subjects to variables ratio with a minimum of ten subjects per variable in the study instrument (20 subjects per each of the 12 variables in the study instrument) [22]. After controlling for 10% non-response to the questionnaire, a minimum sample size of roughly 266 (240/0.9) enrollees was attained.

To gather data from the respondents, 252 copies of a structured questionnaire and 5 IDIs were employed. The quantitative data was analyzed using the Statistical Package for Social Sciences version 20 (SPSS 20) and normal descriptive statistics of frequencies and simple percentages. Inductive content analysis was used to assess the qualitative data. The contingency *chi-square* and spearman's correlation analysis were used to determine the relationship between the variables and the test of hypotheses.

Likert scale position ranking was used to present the quality indicator factors. Strongly agree ranked first followed by Agree, Undecided, Disagree and Strongly disagree. These ordered categories were transformed, summed and the replies were turned into five (5) categories; five (very good), four (good), three (undecided), two (bad) and one (no response) (very bad). The perceptual factors were assessed using five ranking categories on a five point scale, with five being the highest quality and one being the lowest (very low in quality).

Before the study began, the Lagos State Government Health Service Commission issued an ethical clearance code of LSHSC/88/S.3/II/257 (Table 1).

RESULTS

Socio-demographic characteristics of the respondents

Table 1 shows that majority (67.5%) of the respondents were females. This percentage of the female respondents corresponds with the last census report. Again, a larger proportion (53.2%) of the respondents was married. The majority (36.0%) of the respondents fall within the age bracket of 31 and 40 which represents the active working population with a mean interval of 3.0278. Although more expensive, larger proportion of the

respondents (81.3%) subscribed to the private HMO plan and 82.5% accessed care in private HCFs. This may be due to the fact that quality is mostly associated with price tag as discovered in a study conducted to assess patients' satisfaction with access to public and private healthcare centers in London.

Table 1: Socio-demographic characteristics of respondents.

Variable	Frequency (N=252)	Percentage (%)
Gender		
Male	82	32.5
Female	170	67.5
Age		
18-20	22	8.7
21-30	66	26.2
31-40	93	36.9
41-50	25	9.9
51-65	46	18.3
Public-private partnership		
Public/NHIS	47	18.7

Private/HMO	205	81.3
Public-private HCFs		
Public HCFs	44	17.5
Private HCFs	208	82.5

The combined weight of Strongly Agreed (SA) and Agree (A) in Table 2 shows that 63.9% respondents attested positively to the doctor's manner, 58% combined weight of Strongly Agree (SA) and Agree (A) attested to clarity of illness explanation, 59.5% of the respondents were satisfied with the examination, 42.5% of the respondents were not subjected to comprehensive tests and 63.9% maintained that the examination was not promptly carried out.

The category process during the IDI enabled to conform to care, process and treatment element. Regarding the quality of treatment, an interviewee asserted thus: "The medications I get as an enrollee is not as effective as the ones I got as a out of pocket paying patient. The HMOs never seem to respond to Pre Authorisation (PA) code request on time". Another respondent assessed thus; "At the pharmacy, whilst, i was told to pay a difference of two thousand naira (2000) for a drug my HMO did not agree with the hospital's tariff, as usual, the most important drug was not in stock! I was told to buy it elsewhere and the last time my HMO instructed i make a purchase with promises of refund six months ago, I am yet to be refunded.

As observed regarding examination, the assessment of the structural quality also includes the use of standard and functional equipment in treatment and some participants recounted their ordeal: "In my entire one year of assessing care in this hospital, I have never been sent for any laboratory diagnosis. Once I complained and the doctor picked an offense. I was told that NHIS does not permit hospitals to carry out unnecessary laboratory tests". A respondent further stated thus: "I feel the doctors always avoid sending patients to the laboratory to ensure treatment is not discontinued. Technically, only sick people come to the hospital, so, the longer the ailment, the more frequent the patient comes in for treatment. For instance, I have been visiting this hospital for the past six months on continuous case of malaria without a blood test". These responses suggested alongside the quantitative report that healthcare facilities were in possession of standard and functional equipment. While, enrollees were deprived of such evident based means of healthcare service, out of pocket paying patients had unrestricted access. Further inquiry also revealed that the type of insurance plan also affected the quality of illness treatment individual enrollees have access to at the hospital.

Table 2: Distribution of respondents on quality of illness treatment.

Questionnaire Item	Responses					Total
	Strongly agree (%)	Agree (%)	Undecided (%)	Disagree (%)	Strongly disagree (%)	
The doctor's manner was very receptive	72 (28.6%)	89 (35.3%)	14 (5.6%)	43 (17.1%)	34 (13.5%)	252 (100%)
The doctor's explanation of my illness was clear (cause, progress, seriousness).	37 (14.7%)	109 (43.3%)	15 (6.0%)	54 (21.4%)	37 (14.7%)	252 (100%)
The doctor's examination was satisfactory	37 (14.7%)	113 (44.8%)	16 (6.3%)	45 (17.9%)	41 (15.3%)	252 (100%)
The examination was promptly carried out	29 (11.5%)	37 (14.7%)	25 (9.9%)	65 (25.8%)	96 (38.1%)	252 (100%)
I was subjected to comprehensive tests	28 (11.1%)	102 (40.5%)	15 (6.0%)	60 (23.8%)	47 (18.7%)	252 (100%)

This Table 3 shows that compare to the 40.5% combine weight of low and very low perception, a combine weight of very high and fairly high perception shows that majority (46.1%) of the respondents perceived the quality of illness treatment to be positive.

Test of hypothesis

H$_0$: There is no significant relationship between the quality of illness treatment and enrollees' assessment.

H$_1$: There is significant relationship between the quality of illness treatment and enrollees' assessment.

Decision criterion: Reject H$_0$ if the calculated (observed value) of *chi-square* (χ^{2c}) is found to be greater than the critical (table) value of *chi-square* χ^{2t} (0.01), if not, do not reject. Data from Tables 2 and 3 were cross tabulated and used in testing this hypothesis. The result is shown in Table 4.

Table 3: Distribution of respondents perception on quality of illness treatment.

Questionnaire item	Responses					Total
	Very high perception (%)	Fairly high perception (%)	Average perception (%)	Low perception (%)	Very low perception (%)	
Quality of illness treatment rate	39 (15.5%)	77 (30.6%)	34 (13.5%)	67 (26.6%)	35 (13.9%)	252 (100%)

Table 4: Cross tabulation of relationship between quality of illness treatment and enrollees' assessment.

Variables	Very high perception (%)	Average perception (%)	Very low perception (%)	Total	χ2
Very good	18 (48.6)	7 (18.9)	12 (32.4)	3(100.)	χ2=42.120
Good	42 (51.8)	6 (7.4)	33 (40.8)	81 (100.)	r=.101
Undecided	22 (46.8)	10 (21.3)	15 (31.9)	47 (100.)	P=.000
Bad	19 (39.6)	6 (12.5)	23 (47.9)	48 (100.)	df=16
Very bad	15 (38.4)	5 (12.8)	12 (48.7)	39 (100.)	

Note: ** Correlation is significant at the 0.01 level

Table 4 shows the relationship between enrollees' perception and the quality of illness treatment. Among enrollees' who accessed clinical care at the HCFs, a total of sixty respondents' who are very high in perception who also saw the quality of illness treatment to be very good and good is higher than those (34) who are very high in perception but saw the quality of illness treatment as bad and very bad. Also the 60 respondents' is higher than those (35) who are very low in perception and also saw the quality of treatment as very bad and bad. As we see from these group comparisons therefore, we can see empirically that there is a relationship between perception and quality of illness treatment.

Inferential statistics supports this empirical observation because the calculated χ^2 (16)=42.120 is higher than the critical *chi-square* (P<0.01). Therefore the null hypothesis is rejected and the alternate hypothesis accepted. Also, the Spearman's correlation (r)=0.101 shows a positive relation between perception and quality of illness treatment.

DISCUSSION

Among enrollees' who accessed clinical care at the HCFs, it was discovered that the doctor's manner, explanation, as well as examination was perceived satisfactorily. Significant number of enrollees' submitted to not being subjected to comprehensive tests and that the examination was not promptly carried out. This finding is in consonance with those of [7,8], result of about 72% respondents' indication of delay in health care services attention.

In the course of the IDI, the researcher observed that the health plan of an enrollee also affects the quality of service (treatment) rendered to enrollees, The health plans impact on quality of services (treatment) corroborates the United States 2016 quality of care report, which showed that in 2015, individuals on private insurance were given proper care management/ examination frequently than people with Medicaid or Medicare advantage [1]. The United States Agency for Healthcare Research and Quality using over a hundred (100) quality measures, found that the receipt of proper treatment/ examination differs greatly according to individual's form of insurance (Medicaid, Medicare Advantage or Private insurance).

Although quality features included ease of use, penetrability, inexpensiveness, tolerability, suitability, capability, aptness, anonymity, confidentiality, treatment, sensitivity, transparency, precision, reliability, comprehensiveness, consistency, equity, amenities and facilities, it is evident from the study IDI that illness treatment on the platform of being an NHIS-HMO enrollee cannot be regarded in comparison with out of pocket paying patients standard.

CONCLUSION

The study concludes that more than three quarters of enrollees are enrolled under the private HMO plan. Also, private HCFs are largely patronized from about one tenth of available accredited health care providers. Which means some HCF are over patronised in contrast to others. Likewise, true to conventional arrangement in Nigeria, majority of the enrollees' accessing care under the NHIS-HMO scheme are females.

While, statements pertaining to the medical consultant (doctor) mannerism, explanation and examination received high note, the study concluded that cases of recurrent patronage of enrollees' during IDI interview statements to HCFs for same medical ailment were results from absence of comprehensive tests, hence, government should take appropriate measures including pro-active inspectorate division be set to ensure that accredited HCPs deliver evidence based service such as enrollees be allowed access to testing facilities like laboratory in ensuring the desired healthcare result is achieved.

DISCLOSURE

Availability of data and materials

All data generated or analysed during this study are included in this published article.

COMPETING INTERESTS

The authors declare that they have no conflict of interests.

FUNDING

This study did not receive any funding in any form

ACKNOWLEDGMENTS

The authors would like to thank Prof. Rev. Stephen Olugbemiga OWA, Mr. Isaac Akintoyese Oyekola, Dr. Olayinka Onayemi, Oluwaseyi Ibijola; Awobusuyi Ayoade; Oludipe Emmanuel and all participant enrollees and the HCFs/HCPs for their roles in the success of the study.

The cited preprint work "Impact of Quality Healthcare Equipment And Physical Structure on NHIS-HMO Outpatient Enrollees' Perception In Lagos Hospitals is a different article.

ETHICAL DECLARATION

Before the study began, the Lagos State Government Health Service Commission issued an ethical clearance code of LSHSC/88/S.3/II/257. Written informed consent was obtained from all HCFs/HCPs management as well as the participants.

REFERENCES

1. Agency for Healthcare Research and Quality. Understanding quality measurement. 2017.

2. Donabedian A. The definition of quality and approaches to its assessment. Health Administration Press. 1980;260(12):1743-1748.

3. Varul MZ. Talcott persons, the sick role and chronic illness. Body Soc. 2010;16(2):72-94.

4. Awosika L. Health insurance and managed care in Nigeria. Ann Ib Postgrad Med. 2005;3(2):44-46.

5. International Labour Organization. National Health Insurance Scheme Decree No. 35 of 1999. 2019, pp. 1365-1397.

6. Ibiwoye A, Adeleke IA. Does national health insurance promote access to quality healtcare? Evidence from Nigeria. Geneva Pap Risk Insur: Issues Pract. 2008;33(2):219-233.

7. Awe AT, Sanusi RA. An assessment of awareness level of national health insurance scheme (NHIS) among health care consumers in Oyo State, Nigeria. J Soc Sci. 2009;4(2):143-148.

8. Arodiogbu IL. Introducing social health insurance to solve problems of poor health sectorfinancing in Nigeria. Unpublished MSc Thesis Submitted to the Department of Health Management, Planning and Policy, University of Leeds. 2005.

9. Okaro AO, Ohagwu CC, Njoku J. Awareness and perception of National Health Insurance Scheme (NHIS) among radiographers in south east Nigeria. Am J Sci Res. 2010;8(1):18-25.

10. Federal Ministry of Health (FMOH). Strategic Review of Nigeria's National Health Insurance Scheme. Abuja, Nigeria. 2014. Irinoye AI. Optimal management of health care organisations. Spectum Books. Ibadan, Nigeria. 2004;416.

11. Parasuraman A, Zeithaml VA, Berry LL. A conceptual model of service quality and its implications for future research. J Mark. 1985;49(4):41-50.

12. Parasuraman A, Zeithaml VA, Berry LL. Servqual: Multiple-item scale for measuring consumer perception of service quality. J Retail. 1988;64(1):12.

13. Parasuraman A, Zeithaml VA, Berry IL. Refinement and reassessment of the servqual Scale. J Retail. 1991;67(4):420-450.

14. Zeithaml VA, Bitner MJ. Services Marketing. New York. New York ,Usa. 1996.

15. Ojatta DO, Eguda SO. Gender and Global System of Mobile Communications (GSM) Amongst Undergraduates of Tertiary Institutions in Kogi State. Niger J Entrep Entrep Maage. 2009;1(2): 48-57.

16. Lamb C, Hair J, McDaniel C. Marketing. 5th Ed, South-Western: College Publishing, Tennesse, USA. 2000.

17. Conrad P, Barker KK. The social construction of illness: Key insights and policy implications. J Health Soc Behav. 2010;51(1):67-79.

18. Alderson P, Madden M, Oakley A, Wilkins R. Women's views of breast cancer treatment and research. London: Institute of Education. 1994.

19. Mkperedem AA, Ogunlade P, Asamu F, Rasak B, Arisukwu OC. Impact of quality healthcare equipment and physical structure on NHIS-HM outpatient enrollees'perception in lagos hospitals. 2020.

20. Pett MA, Lackey NR, Sullivan JJ. Making Sense of Factor Analysis: The use of factor analysis for instrument development in health care research. Sage Publications Inc. 2003.

21. Frimpong O, Nana NS, Dason B. Measuring service quality and patient satisfaction withaccess to public and private healthcare delivery. Int J Public Sect Manag. 2010;23(3):203-220.

22. Mosadeghrad AM. Towards a theory of quality management: An integration of strategicmanagement, quality management and project management. Int J model Prod Manag. 2012;2(1):89-118.