

An Assessment of Socio-Economic Effect of National Health Insurance Scheme on Quality, Accessible and Affordable Healthcare in Nigeria

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Abstract. Accessible, affordable and quality healthcare remain one of the daunting challenges bedeviling most health systems globally especially the sub-Saharan Africa countries including Nigeria. This has pushed government of most countries to increase the allocation of revenue to the sector in order to create health systems that meet the needs of the masses. This no doubt has occasioned more public health spending annually with little or no desired expected health outcome. To afford quality healthcare, health seekers indulged more in out-of-pocket spending which unreasonably impacts on the households' income thereby impoverishing low income earners. As social security measure, governments of most countries introduced health insurance schemes that shared in part of health financing of individuals to ensuring accessible, affordable, quality and universal health coverage for all. In spite of the scheme, the three health needs viz; accessibility, affordability, and quality healthcare still remain inadequate. The rationale behind this study is to explore the extent to which national health insurance scheme (NHIS) of Nigeria has impacted on the health system through promotion of accessible, affordable and quality healthcare in Nigeria. To actualize the objective of the study, descriptive statistical technique using frequency, percentage, graph and chi-square test were utilized. The study concluded based on responses of the respondents that national health insurance scheme(NHIS) had significantly impacted on the health needs of the populace by promoting accessibility to healthcare, making it easy for the health seekers through the financing of health needs and promoting good health in Nigeria. On the contrary, the study discovered that majority of the populace in the informal sector are

not adequately captured in the health insurance scheme therefore recommend the inclusion of informal sectors comprising of both private and self-employed into the scheme to achieving universal health coverage in Nigeria.

Keywords: Quality healthcare, Accessibility, Affordability, Health insurance Scheme.

1. Introduction

Healthcare is a term that connotes the well-functioning of the three -tier health care delivery systems viz; primary, secondary and tertiary in providing quality health that is affordable and accessible to the masses at their respective levels. Therefore, some or almost the associated benefits of healthcare are lacking in most health systems in sub-Saharan Africa including Nigeria thereby creating adverse effects on the socio-economic lives of the citizens. Though, according to agency for healthcare research and quality (AHRQ)(2016), access to healthcare may vary across countries, communities, and individuals as they are influenced by their social and economic status in addition to health policies. Among the impending social and economic factors to actualizing quality health, accessibility and affordability are predominantly low income, transportation barriers, illiteracy, inadequate or lack of insurance coverage etc. Access to comprehensive, quality healthcare services is important for promoting and maintaining health, preventing and managing disease, reducing unnecessary disability and premature death. In the face of low income and serious poverty level, reliance on effective and

adequate insurance coverage to cushion the socio-economic effect of health spending becomes important. Lack of adequate insurance coverage to Hadley (2007) means likelihood to have poor health status, less medical care and premature death. This study investigated the roles of National Health Insurance Scheme (NHIS) in promoting healthy living through the provision of quality, accessible and affordable healthcare in Nigeria with empirical evidence from Delta State. To live a healthy life, its bound on every individual household to spend on health consumption goods which entails some form of financial challenges to healthcare seekers most especially among low and medium income groups in developing countries especially Sub-Saharan Africa which Nigeria is part of. Therefore, the inadequate resources on the part of individuals to meet health needs exposed individuals' households to abject poverty owing to their income levels which demands for programs initiated by the government and non-governmental organization so as to create healthy living among the populace. This study is therefore, motivated to explore the roles of National Health Insurance Scheme (NHIS) in promoting healthy living among individuals.

2. Literature Review

The dynamics of health insurance involves pooling of resources among the rich and the poor for risk sharing and burden bearing via periodic payment of premium to avoid huge payment of treatment cost which usually come unannounced (Grace et al., 2017). In view of the high need for healthcare with limited in supply of resource, healthcare spending may be catastrophic since majority of the people are living below poverty line. It becomes essential the need for repositioning of the National Health Insurance Scheme to promote its effectiveness and improve efficiency for better enrollment and health coverage. National Health Insurance Scheme (NHIS) was implemented as part of health reform and strategies aimed at providing effective and efficient health care for citizens most especially in developing countries. Despite its significant roles in promoting quality health outcomes, some countries among the developing nations have not made a progressive stride in the implementation of the programme. Though, it is established that quite a number of countries among the developing nations have made it to the middle and late stages of implementation of the programme. In spite of the challenges surrounding the implementation, most developing countries such as Nigeria, India, and Kenya have increased government spending as a percentage of total health expenditure between 1 and 3 percent (Lagomarsino

et al.,(2012) cited in Mohammed et al.:(2014). According to Lagomarsino et al.,(2012) there is evidence of high total health expenditure in Ghana, Rwanda, and Indonesia which is between 5 and 10 percentage points following the launching of health financing reforms in these Countries compare to their counterpart Countries like Nigeria, Kenya, and India. They also recognized that most of these Countries adopt incremental approach to risk pooling therefore commences with multiple pools for different target populations. In Nigeria, health insurance was introduced to the citizens in mid-2005. Presently, revenue needed for implementation of the National Health Insurance Scheme (NHIS) relies on contributions from the formal sector and general government revenues, despite the challenges of tax collection. The formal sector programmes are financed with funds created by the contributions pooling from the employees and employers (Muhammed et al., 2014). Contributions to the program are made up of 15%, with employees contributing 5% of his/her basic salaries and employers contributing 10%. Nigeria has adopted the incremental approach of risk pooling, using multiple stages which would later incorporate other population groups in different NHIS programs. Purchasing services, in the NHIS, is accomplished through a mix of public and private providers who are reimbursed by purchasing agency resources controlled by health management organizations (HMOs).

The role of health management organization (HMOs) in achieving the laudable objectives has been remarkable in the successful implementation of the National Health Insurance Scheme (NHIS). Emphasizing the roles of NHIS in Bureau of Public Service Reforms (BPSR) lunch time seminar, Usman (2018) posited that it is a strong dynamic and responsive scheme that is totally committed to securing universal coverage and access to adequate and affordable healthcare among Nigerians most especially the enrollees in the program. He maintained that the stakeholders especially the health management organisations are public and private limited liability companies which are registered by National Health Insurance Scheme (NHIS) exclusively to manage the provision of healthcare, collect contributions from registered members, maintain standard and quality in health care services in Nigeria. They pay capitation and Fee-For-services (FFS) and make necessary payments to the appropriate pools (accessed on <http://bpsr.gov.ng/index.php/media>).

2.1 Theoretical Review

The role of health in promoting the wellbeing of individual and overall economic growth and development of every nation has been acknowledged by proponents of human capital theory like Becker (1964) who focused on the education component. However, Grossman (1973) emphasized on the demand for health in like manner individual demand for food to sustain. Grossman was the first to construct a model of the demand for health by applying human capital theory. Therefore, to have good health involves financial spending which could either emanate from the private individual, public or donors. In the case of private, it is associated with sometimes catastrophic spending. It is in the bid to ameliorate the effect of individual out-of-pocket spending given the level of poverty among populace that led to the health insurance scheme that provides for affordability and accessibility of healthcare among the populace.

Solow (1956) also developed a procedure, “growth accounting” that focus directly on the input of each term in the production function. This was to verify that the magnitude of recorded economic growth could be ascribed to growth in capital stock, growth in the labor force, and changes in overall efficiency. with the function $Y=(K, L, A)$ where Y is output, K is capital, L is labor, and A is a parameter employed to capture the effects of things other than capital stock and labor supply which might influence growth such as increasing technology, worker skill levels, education, health, institutions, and so on.

2.2 Empirical Review

Blanchet et al.,(2012) investigated the effect of Ghana’s National Health Insurance Scheme(NHIS) on health care utilization using survey data from the second wave of the Women’s Health Survey of Accra to measure the burden of disease among representative sample of adult women from the age of eighteen years above in the Accra Metropolitan area and discovered that average individuals enrolled in the insurance scheme are significantly more likely to obtain prescriptions, visit clinics and seek formal health care when sick. Their study concluded the country government’s objectives to increase access to formal health care sector through health insurance have at least partially been achieved.

In another study conducted in Nigeria Akande et al., (2011) investigated the effects of National Health insurance scheme on utilization of health services at University of Ilorin teaching hospital’s staff clinic

using descriptive cross-sectional approach to compare the pattern of utilization of the staff clinic two years before and after the commencement of National Health Insurance Scheme (NHIS) at the university of Ilorin teaching hospital and their result revealed that National Health Insurance Scheme (NHIS) led to 144 percent increase in the utilization of health services at staff clinic of the teaching hospital.

In order to examine the implementation of the effects of National Health Insurance Scheme (NHIS) in minimizing the burden of out-of-pocket expenditure, a retrospective study was undertaken by Aryeetey et al.,(2016) and analysed the effect of the scheme on health service delivery in mission facilities in Ghana. Their study used service delivery indicators such as outpatient and inpatient turn out, estimation of general service readiness, revenue and expenditure, claims processing and availability of essential medicines with the aid of structured questionnaires to collect data from 38 missions. Their study revealed that there were significant increases in outpatient and inpatient attendance and improved medicines. Though, the study reported high rate of non-reimbursement of National Health Insurance Scheme (NHIS) claims which they attributed to errors in claims processing, clear reporting procedures and lack of feedback.

Results from the studies of these countries that have embarked on the national health insurance scheme established that the scheme has a positive impact on the health care systems of these Countries. Evidence from the study of Collins et al.,(2007) in Akande et al.,(2011) investigated the current and future role of United States companies in the provision and financing of health insurance and their findings indicate that health insurance in Baltimore, USA was found to lead to increase in non-urgent utilization of health facilities. In related study in Taiwan, it was discovered a remarkable increase in the utilization of prenatal and intra-partum care services due to implementation of National Health Insurance Scheme (Speck, et al.,2003) cited in Akande et al., (2011). In North Carolina, National Health Insurance Scheme was established to grant access more to insured children to emergency department visit than un-insured children (Li-Mei et al., 2001) in Akande et al., (2011).

To determine the increase in the equitable access to health care, Bonfrer et al.,(2016) evaluated the effects of Ghana’s National Health Insurance Scheme on Maternal and Infant Health care utilization using data on births before and after the intervention and

propensity score matching to limit the bias arising from self-selection into health insurance. Their study used household survey with individual data collected for 4916 women of age between 15-49. Their study revealed that NHIS scheme significantly increased the proportion of pregnancies with at least four antenatal care visits with 7% points and significant effect on attended deliveries by 10% points. Their findings are similar to that of Speck et al., (2003) in their study carried out in Taiwan.

In the same vein, to address the problem of financial difficulties facing individual in accessing health care services in Jaman North, Mensah (2011) investigated the impact of National Health Insurance Scheme on Health Delivery in Brong Ahafo Region using structured questionnaires designed for insured and noninsured. They utilized descriptive statistics analytical method to assess whether or not the introduction of NHIS has impact on delivery of health service, to determine the utilization rate of health service for both insured and noninsured on disease incidence. The study concludes that the vulnerable and the marginalized were getting access to health care in the district and utilization of health service has increased over the years.

Using two outcomes variables Van derWielen et al., (2017) examined the relationship between National Health Insurance Scheme enrollment and the utilization of inpatients and outpatients healthcare for older adults in rural areas in Ghana. The study utilized the living standard survey of Ghana citizens from 2012 to 2013 and propensity score matching to estimate the effect of enrollment within the NHIS on the utilization of inpatient and outpatient care among the older people aged 50 and above and discovered that implementation of National Health Insurance Scheme had improved the utilization of healthcare among enrollees members. Therefore, the results of their findings indicate that NHIS members were 6% and 9% more likely to use inpatient and outpatient care, respectively than non-members. Significantly, their results indicate that the poor are still at a great disadvantage in their use of health services.

In another approach to exploring the potential of social health insurance in Africa, it becomes important to evaluate the effectiveness of NHIS in the enhancement of healthcare utilization and reduction of out-of-pocket spending that may have a strong policy implication in the region. Given this, Agar and Noemi (2010) investigated the effects of the National Health Insurance Scheme in Ghana to determine how the scheme affects the utilization of maternal health care services and medical out-of-

pocket expense. To achieve the objective of their study, they utilized nationally representative household data from the Ghana Demographic and Health Survey to measure antenatal checkup, delivery in a health facility, delivery assisted by a trained person and out-of-pocket expenditure as the four outcome variables. From their estimated probit and bivariate probit model, they concluded that NHIS enrollment positively affected the probability of formal antenatal check-ups before delivery, the probability of delivery in an institution and the probability of being assisted by trained person during delivery. Contrary, it was revealed in their study that NHIS enrollment do not have significant effect on out-of-pocket spending. This is very important as catastrophic out-of-pocket spending may result in impoverishment of the individual. To substantiate the effects of health insurance, Ha-Th et al.,(2011) undertook the evaluation of the financial protection effect of country's National Health Insurance Scheme on households' out-of-pocket spending and catastrophic health expenditure using survey data from two district. Using probit regression model, their results revealed that the scheme has a protective effect against the financial burden of health care, reducing significantly the likelihood of incurring catastrophic expenditure among individual households. Again, to examine the effect of insurance on demand of healthcare in the context of National Health Insurance Scheme in Ghana, Kofi and Richmond utilized three methodological approaches such as internet search, systematic review and content analysis and concluded that outpatients and inpatients service utilization has consistently increased since the introduction of NHIS in Ghana.

2.3 Theoretical Framework

Human capital theory according to Grossman (1972) and Becker (1964) constitute two components which are health and education that promotes the welfare of both individual and the growth and development of the Country at large. Given this, health has utility function which is subject to the decision of the individual to either spend or have improved health or not to spend to have ill-health. Therefore, the decision to spend on health as a component of human capital development is regarded empirically to contribute to the growth of per capita income of the individual which in turn promotes the economic growth of a Country. Howitt (2005), Akram, et al., (2008) and the WHO (2008) have identified the human capital development measuring on the basis of health care status and education as key determinants of economic growth.

3. Research Methodology

To actualize the objectives of the study, survey method was used to collect primary data using instrument of standard questionnaires which were administered in the metropolis of Asaba, the capital of Delta State. The study used tables, percentages and frequencies to analyze the data and chi-square statistics to test the level of significance.

4. Results and Discussion

The study revealed that National Health Insurance Scheme (NHIS) has contributed significantly towards the achievement of the provision of quality, accessible and affordable healthcare in Nigeria as demonstrated from the descriptive analyses. The role of NHIS in the provision of quality healthcare to the individual households was shown to be very impressive as indicated by the responses of the respondents which constituted 32.6% of the population of the study. In the same vein, the study also revealed that National Health Insurance Scheme (NHIS) has substantially made lot easier the accessibility to healthcare as depicted from the findings that about 242(66.3%) of the respondents agreed that the scheme promotes health care accessibility while about 77(21.1%) of the respondents strongly agreed that the scheme promotes health care accessibility of individuals health needs. This puts the total respondent who favours the scheme at 87.4% leaving only 12.6% of the responses contrary to the promotion of accessibility to healthcare as demonstrated in figure 1.

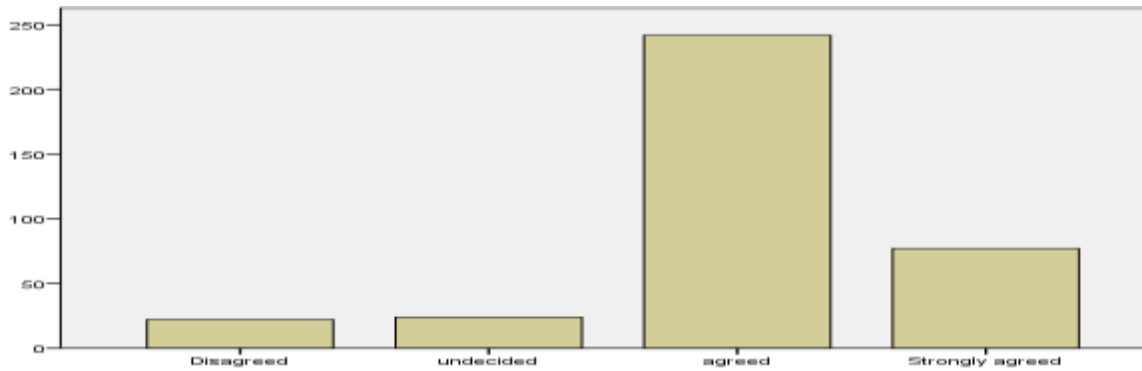


Figure 1 showing the degree to which NHIS promote accessibility to health care needs of the people.
Source: Authors' computation.

The study also demonstrated NHIS contributions towards attaining the objective of mitigating the burden of medical care spending among individuals seeking healthcare as gleaned from the findings were about 141(38.6%) of the respondents agreed and about 194(53.2%) strongly agreed, thereby constituted 91.8% of the respondents that agreed that National Health Insurance Scheme has the capability to take off burden associated with medical care financing. This finding was confirmed by the test statistics that shows that NHIS has significant reducing effect of financial burden associated with medical spending as depicted in figure 2.

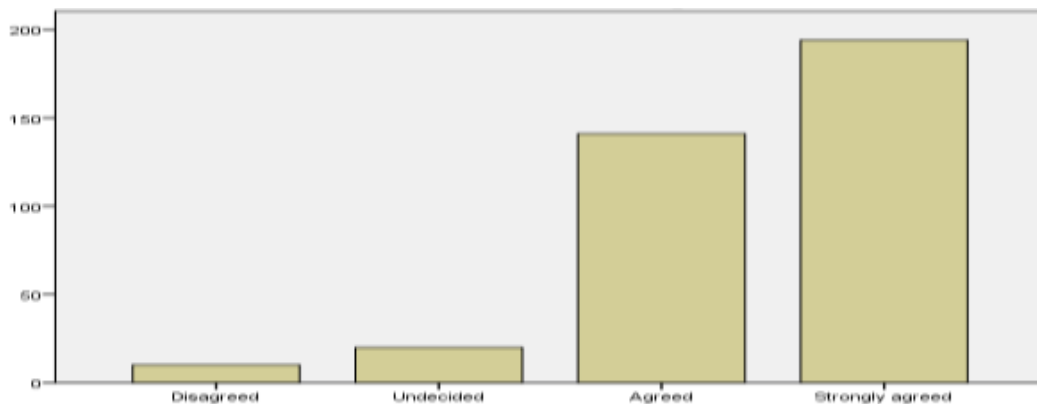


Figure 2 showing the reduction of medical burden through Enrollment in the National Health Insurance Scheme(NHIS).

Source: Authors' Computation.

However, despite the significant contributions of the scheme in ameliorating the problem of healthcare spending, the study indicates that there is still low enrolment into the scheme.

4.1 Presentation of Chi-Square(X²) Test Results.

To determine the realization of the objectives underlying the study, answer the research questions and test the significance of the research hypotheses, the study employed Chi-Square(X²) Test Statistic. The summary of the Chi-square test results are presented in a table 1.

Table 1: Summary of Chi-Square(X²) Test Results.

	Enrollment in the National Health Insurance Scheme take off burden associated with medical care financing	How would you rate the performance of National Health Insurance Scheme	The services of NHIS are assumed to promote accessibility to health care needs of the people	NHIS provides quality health for the people of Nigeria	National Health Insurance Scheme (NHIS) promotes health outcome among Nigerians	National Health Insurance Scheme (NHIS) is said to mitigate healthcare financial burden among Nigerians.	NHIS has promoted healthcare coverage in Nigeria.	If not enrolled in NHIS, how do you finance medical care?
Chi-Square	270.803 ^a	137.433 ^a	353.389 ^a	188.000 ^b	574.890 ^a	235.844 ^a	133.005 ^a	534.986 ^b
Df	3	3	3	4	3	3	3	4
Asymp. Sig.	.000*	.000*	.000*	.000*	.000*	.000*	.000*	.000*

Sources: SPSS output/Authors' field survey and computations.

4.2 Analysis and Interpretation of Chi-Square test Results

To test the hypotheses of the study, chi-square test was used. Therefore, the results in table 4.16 above showed that the performance of the NHIS, as demonstrated by the X²=137.43, df=3 and p-value =0.001 indicates that the performance of the scheme is effective and statistically significant at 1% level. In the same vein, it was demonstrated by the value of X²=188.00, df=4 and p-value= 0.001 that NHIS provides quality health for the people of Nigeria and statistically significant at 1% level providing substantial information to accept the alternative hypothesis and reject the null hypothesis number one (1) of the study which states that NHIS do not provide quality healthcare in Nigeria. The value of X²=574.89, df=3 and p-value= 0.001 posited that National Health Insurance Scheme (NHIS) promotes health outcome among Nigerians as it is statistically significant at 1% level. The results indicates that the services of NHIS are assumed to promote accessibility to health care needs of the people as indicated by the value of X²=353.39, df=3 and p-

value= 0.001 indicating that it is statistically significant at 1% level. This provides the study adequate evidence to accept the alternative hypothesis number two (2) and reject the null hypothesis of the study which states that NHIS do not promote accessibility to healthcare in Nigeria. To measure the level in which NHIS has promoted healthcare coverage in Nigeria, the value of X²=133.01, df=3 and p-value= 0.001 which is statistically significant at 1% level. This provides enough information to accept the alternative hypothesis number three (3) that the scheme has promoted healthcare coverage in Nigeria thereby leads to the rejection of the null hypothesis. The results indicates that National Health Insurance Scheme exhibited effectiveness in reducing the financial burden associated with medical care and it is significant at 1% level as showed by the X²=270.80, df=3 and p-value =0.001.This provides adequate information to accept the alternative hypothesis five (5) and reject the null hypothesis which states that there is no significant relationship between National Health Insurance Scheme and promotion of health outcome in Nigeria.

5. Conclusion and Recommendations

Arising from the findings, the study concludes that National Health Insurance Scheme has played a vital role in the provision of quality healthcare in Nigeria. Again, the scheme has contributed to the ease of healthcare accessibility and affordability which mitigates the financial burden associated with healthcare spending thereby promoting the healthy living of the individuals.

The study therefore recommends intensification of the efforts of government in enhancing the healthcare coverage functions of the scheme. It is also recommended that more awareness most especially in respect of enrolment of individual in the community health based insurance scheme as it aims at providing quality, affordable and accessible healthcare to both formal and informal sectors.

It also recommended based on the findings that adequate financing of healthcare of individuals should be on the basis of private public partnership so as to boost the total health system that will yield desired health outcome.

Arising from the findings of this study, It is also recommended that frantic efforts should be made by the National Health Insurance Scheme to capture more enrollees particularly in the informal sector in order to guarantee adequate health care financing for the vast majority of the populace who cannot afford to pay for their health care needs.

Lastly, to complement the efforts of the National Health Insurance Scheme, the stakeholders in the health sector should focus on health information awareness creation at all levels of governments in order to sensitize the population on the need to imbibe on healthy living by way of preventing diseases instead of curing disease that would amount to huge personal spending.

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