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Gender Variations and Inequity in Healthcare Financing in Nigeria

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ABSTRACT

Healthcare is central to sustainable development, but it is underfunded in many developing countries like Nigeria. This study empirically examined gender variations and inequity in healthcare financing in Nigeria. It specifically analyzed inequity by gender and differences in healthcare financing among states in Nigeria using Dagum's approach for decomposition of the Gini coefficient. The data was sourced from the National Bureau of Statistics National Living Standard Survey. Empirical results showed that healthcare financing gender inequity exists in Nigeria. In addition, variations in healthcare financing inequity among states in Nigeria were found. It is recommended that different population groups be covered to achieve the broader equity and effectiveness goals when implementing healthcare financing reforms. Furthermore, governments in various states should step up efforts to assist disadvantaged and oppressed communities, such as poor indigenous people, in terms of healthcare utilization, which could reduce the healthcare financing burden.

Keywords: Healthcare Financing, Inequity, Gini Coefficient, Gender Variation, Income Distribution

JEL Classification: J16, D63, I14

1. INTRODUCTION

The World Health Organization (WHO) has long been concerned about fair funding and delivery of long-term healthcare programs worldwide. This interest and sometimes a concern of WHO is due to two notable reasons. First, it is believed that how health services are funded has a significant impact on whether people can access required healthcare and face financial difficulty due to accessing healthcare. The second goal is to increase access to healthcare, provide greater financial security to the vulnerable, and fight poverty, hunger, and disease, all of which are core components of the UN Development Goals (Rashad & Sharaf, 2015).

Healthcare financing is usually assessed based on equity and feasibility, efficiency, and sustainability (Azuh et al., 2020). Individuals contribute to healthcare financing based on their ability to pay and benefit from health insurance based on their need for healthcare. Cross-subsidies from the wealthy to the poor and the healthy to the sick are the product of an equitable healthcare funding scheme (Gershon et al., 2020). As a result, the scheme ensures that no family is disadvantaged due to their need for health services and that an unforeseen healthcare expense is not borne solely by a person or a household. Equity in healthcare financing can be analyzed as progressive, regressive, proportional or rank-switching (re-ranking).

As payments as a percentage of income grow with household income, the healthcare finance structure is progressive (Mulenga et al., 2017). In other words, wealthier people

pay a higher tax rate as a percentage of their income than poorer people. It is dependent on the extent to which the healthcare system is sensitive to differences in the income of healthcare consumers. However, if the poorer classes of the population pay a higher proportion of their income than the wealthier groups, the healthcare finance scheme is regressive. A proportional healthcare system is one in which everyone, regardless of rank or wealth, spends the same proportion of their income on healthcare (Urhie et al., 2020). While rank-switching among the various members of the population instigated by differences in contribution to the healthcare system is known as the re-ranking effect of healthcare financing. The systems of healthcare financing profoundly determine the functioning of the healthcare system, especially regarding the equity of the financial burden of healthcare and the accessibility of health services for different groups of a population.

Continuous efforts to reduce healthcare inequity, together with equity and fairness in healthcare financing, have formed a large part of health policies in both developed and developing countries over the years. African governments have also emphasized the importance of developing healthcare funding systems to address inequity in healthcare financing. For example, at the African Union's (AU) Third Ordinary Session of Ministers of Health, held in April 2007 in Johannesburg, South Africa, a commitment was made by the ministers at the end of the meeting to develop social protection mechanisms that will increase access to healthcare facilities and prevent families from falling into debt as a result of healthcare financing.

The study would provide an insight into how to assess healthcare financing inequity by gender in Nigeria. It would also provide measures to examine variations in healthcare financing equity among states in Nigeria. This paper is divided into six sections. Section two follows section one, which is set aside for the socio-economic environment of the study; section three is a review of the literature. Section four is the methodology of this study, while section five presents the results of the investigation. The study is rounded off in section six, with policy recommendations also provided in the section.

2. LITERATURE REVIEW

2.1 Healthcare Arrangement in Nigeria

A pluralistic healthcare system exists in Nigeria, with orthodox and conventional healthcare delivery systems coexisting without cooperation. In Nigeria, both the private and public sectors made orthodox healthcare services available, with conventional medicine on a large scale and private medicine on a smaller scale (Omoluabi, 2014). Broad geographic inequalities in status, service delivery, and resource availability characterize Nigeria's health system. Healthcare services are provided in the area by various public and private healthcare providers, including federal, state, and local government-run hospitals, private for-profit providers, non-governmental organizations (NGOs), community-based and faith-based organizations, and conventional healthcare providers. In Nigeria, there are several healthcare types and facilities. Traditional, biomedical, or western orthodox healers, synthetic healers, and bone settlers are among them. This diversity provides insight into Nigeria's healthcare delivery, maintenance, and management structure. Since the industrial environment in the area failed to alleviate sustainability, the variety resulted in terrible low-quality healthcare and life chances.

According to Uzochukwu, Onwujekwe & Ezumah (2014), staff availability and distribution are not equitable and have resulted in an over-concentration of healthcare staff in urban areas, to the detriment of rural communities, where over 70% of the population are duelling, with a majority of them are impoverished. Healthcare facilities are mostly out-of-stock of essential drugs, also attributed to the

over-centralization of the drug distribution system. These, among others, made the healthcare distribution or delivery system ineffective, inefficient, and inequitable, resulting in the poor healthcare status in Nigeria.

2.2 Healthcare Financing Systems

Healthcare funding schemes are the different forms and sources of funds raised and pooled to pay for healthcare services by public and private healthcare service providers, such as the government, families, corporations, and donors. Healthcare funding aims to ensure that critical healthcare products and services are accessible and that funds are available to buy cost-effective healthcare interventions. Another goal is to provide financial incentives to healthcare service providers, ensuring that all people have access to quality healthcare and that healthcare expenditures are used efficiently and fairly. Tax revenue or tax-based schemes, out-of-pocket payments systems, social health insurance systems, community-based health insurance systems, and donor funding systems are all examples of healthcare finance systems.

2.2.1 The Tax-based System

The tax-based approach is a healthcare funding method in which government proceeds from taxes or other sources cover healthcare costs. The revenue from the federal government forms the majority of funds for states in Nigeria. The states and local governments are responsible for providing primary healthcare. However, due to inadequate internal revenue generation capacities of the states and local governments areas, most of the states still largely depend on federal government allocation. The federal government has no special authority over taxes distributed to states and local governments (Olakunde, 2012). Therefore, the amount spent on secondary and primary healthcare services is not reported to the federal government. This lack of substantial control on funds by the federal government is also rational for differences in healthcare expenditure across states in Nigeria.

2.2.2 Out-of-Pocket Healthcare Payments System

According to Khan et al. (2017), out-of-pocket healthcare spending is the payment for healthcare services at the point of service. User fees are charged to healthcare facilities and are assessed at the time of service. Drug costs, medical material costs, entry fees, and appointment fees are all user fees. In Nigeria, out-of-pocket healthcare payments account for the most significant proportion of health spending. Households are the bearers of the highest burden of healthcare expenditures. Mainly depending on the ability to pay through out-of-pocket payment reduces healthcare consumption, aggravates inequity, and inaccessibility to quality healthcare, and makes households vulnerable to the financial risk of expensive illness and poverty. Households with low-income stretch many financial resources for much-needed healthcare services delivered to them by healthcare suppliers.

2.2.3 Social Health Insurance System (SHI)

The Nigerian Social Health Insurance Scheme (NSHIS) was formed in 1999 under Act 35. Still, it did not go into effect until 2005. The scheme was created to increase access to healthcare and reduce the financial burden of out-of-pocket costs for healthcare services (Olakunde, 2012). Formal Sector; Urban Self-employed; Rural Community; Children Under-Five; Permanently Disabled Persons; Prison Inmates; Tertiary Institutions and Voluntary Participants; and Armed Forces, Police, and other Uniformed Services are among the social health insurance programs included in the system (Olakunde, 2012). Only the formal sector is operational, and it is obligatory for federal, state, and local government workers, with around 90% coverage so far. According to estimates, the program only protects about 0.8 per cent of the population, meaning that many people are left out and do not benefit from it. Inadequate medical services, a shortage of medical personnel, a lack of

knowledge, inadequate funding, mismanagement, and bureaucracy are obstacles to the scheme's efficiency in Nigeria.

2.2.4 Community-Based Health Insurance System

This is a health insurance system whereby private individuals usually finance the cost of healthcare services, groups in a community, or families. Unlike social health insurance, private health insurance is optional, and policies can be for-profit or non-profit. This insurance is formed to provide healthcare services to those living in rural areas and those in the formal sector who do not have appropriate public or private health insurance. The community is partly in the management of these types of healthcare insurances. This insurance system may not be completely free, but the cost could be minimal. But despite the that the cost is minimal, severely poor individuals cannot enrol for it. This is likely to exacerbate healthcare disparities since the extremely vulnerable will not register to access healthcare and financial security.

Community-Based Health Insurance was launched in Anambra State in Nigeria in 2003, according to Olakunde (2012), but the new government that took over in 2005 did not have support or interest in the scheme, so it has been dormant since then. According to Olakunde (2012), the scheme was well-received, and it provided sufficient funding for maternal healthcare services for many rural duelers. It has also been tested and implemented in the western Nigerian states of Lagos and Kwara. Communities' participation in the scheme is affected by factors such as confidence in the scheme's organizer or manager, the value of the benefits package, the affordability of the fee, and the consistency of the healthcare given.

2.2.5 Donor Funding System

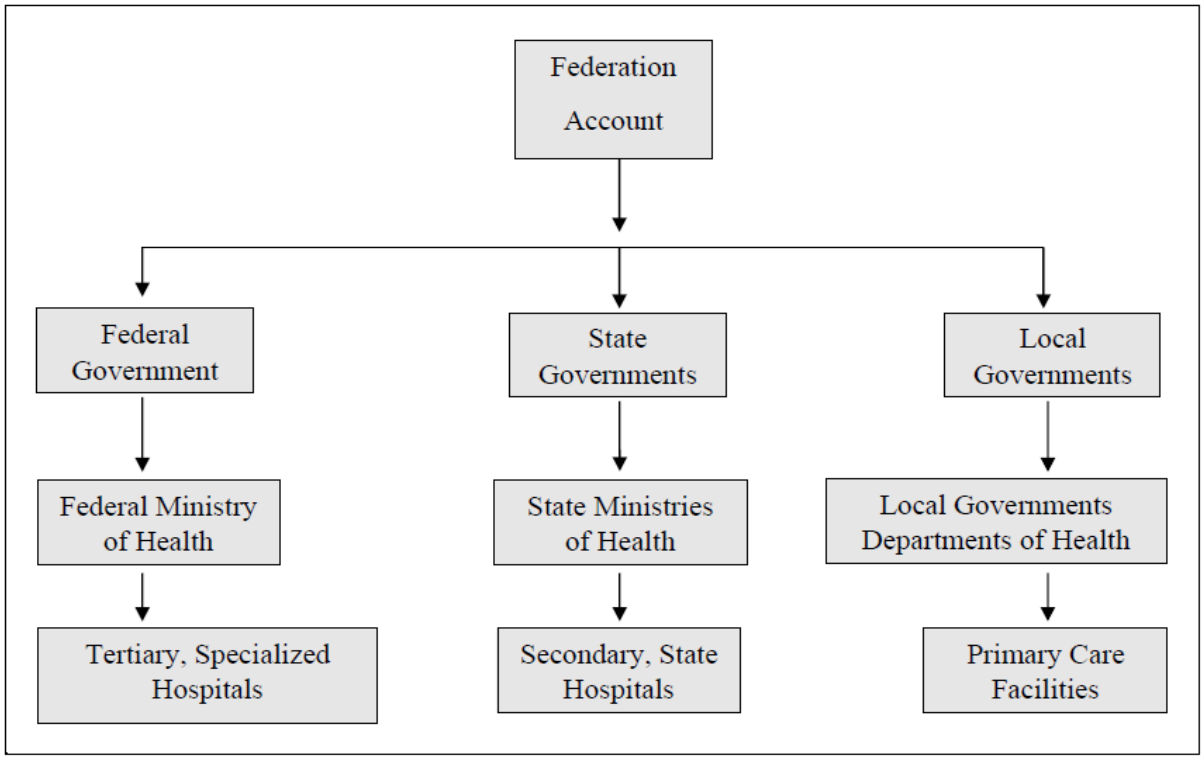
Developed countries and non-governmental organizations such as the World Bank and the World Health Organization (WHO) provide financial assistance to developing countries to help them achieve socioeconomic and healthcare growth. Despite increased foreign funding for healthcare in Nigeria, the proportion of public healthcare spending remains poor. According to Yunusa, Irinoye, Suberu, Garba, Timothy, Dalhatu, and Ahmed (2014), the United States Agency for International Development (USAID) announced a US$20 million scheme to provide affordable funding options and increase capacity in Nigeria's primary healthcare system during the World Economic Forum on Africa (WEFA) held between the 7th and 9th of May 2014 in Abuja. The scheme was designed to help the country prevent infant and maternal mortality.

2.3 The Role of Local, State and Federal Governments in Providing and Regulating Healthcare

Local governments own and finance the majority of primary healthcare facilities. State governments are responsible for secondary and tertiary healthcare, including general hospitals, state university teaching hospitals, and state speciality hospitals. The federal government is responsible for teaching hospitals at federal universities, federal medical centres, specialist tertiary-level healthcare facilities, and national hospitals (Ohadi, El-Khoury, Williamson & Brinkerhoff, 2012).

Local governments play an essential role in healthcare, and any proposals for introducing healthcare legislation must involve them. Even if the federal and state governments set policies and guidelines, local governments distribute and provide different healthcare services, especially those aimed at disadvantaged groups in the community. If local governments are not involved in efforts to enact healthcare changes, there would undoubtedly be needless delays and complications, which would have a negative impact on people who rely on local governments to provide healthcare services.

Figure 1: Public Expenditure Distribution in the Health Sector



Source: Adapted from Ohadi, El-Khoury, Williamson & Brinkerhoff (2012)

2.4 Key Diseases that are prevalent in Nigeria and the Most Likely Source of Healthcare

Malaria and Typhoid bacteria are the most prevalent in Nigeria. The transmission, in most cases, gets so prevalent towards the end of the rainy season. The most familiar mosquito species that exist in Nigeria that have been implicated in the transmission of malaria include Anopheles gambiae and Anopheles funestus. The bacteria that cause Malaria and Typhoid necessitate both outpatient and inpatient treatment. Respiratory disorders are the second most common health problem. The most common non-communicable condition that resulted in visits to both outpatient and inpatient healthcare units is hypertension (Onwujekwe, Uzochukwu & Onoka, 2011).

When a patient is ill, the private sector is the most likely healthcare provider in the country. For healthcare facilities, patent medicine dealers are the most commonly visited. Private hospitals and pharmacies are the next most likely providers of healthcare facilities. In comparison to private insurers, public hospitals and primary healthcare centres are used less. Residents in urban areas use private and public hospitals and clinics more often than people who live in rural areas. Rural people most often use patent drug dealers and herbalists.

The visit to public and private hospitals, pharmacies, and laboratories for care varies proportionately with the people's socioeconomic status. In contrast, the visit to patent medicine dealers for care varies inversely with the people's socioeconomic status (Onwujekwe, Uzochukwu & Onoka, 2011). In other words, the income level (socioeconomic status) determines the likely healthcare to use when a patient falls sick. Onwujekwe, Uzochukwu, and Onoka (2011) found that the concentration indices for primary healthcare centres, patent medicine dealers, laboratories, and others were negative (pro-poor) when relating people's healthcare-seeking behaviour to their socioeconomic status. People with a favourable concentration index (pro-rich) seek home care, private and public hospitals, pharmacies, and herbalists. Total

healthcare costs in the public sector and out-patient usage in the public sector rise as socioeconomic status rises. Better-off people have more disposable income to pay for healthcare. Also, most likely or frequent visits to the private sector for healthcare are frequent drug stock-outs in public healthcare facilities.

2.5 Theories of Healthcare Financing

2.5.1 Libertarian Theory of Distributive Justice and Equity Healthcare Financing

Nazick is a leading adherent of the libertarian philosophy (1974). Nozick establishes the libertarian framework from entitlement theory in his essay, arguing that individuals should be entitled to capital ownership and profits. In a free market-based system, they have the right to pass those holdings to another individual. As a result, the transferee gains ownership of the land, which is considered the only legal form of transfer. For healthcare systems, the libertarian philosophy is based on equity. It is concerned with the degree to which people have the freedom to purchase the healthcare they want. According to the Libertarian viewpoint, society comprises natural and voluntary associations among autonomous and equal individuals that serve their needs in various ways. Societies must be regulated on these foundations to guarantee the security of a collection of human rights.

2.5.2Egalitarian Theory of Distributive Justice and Equity Healthcare Financing

According to Mattisson (2017), the egalitarian theory is based on Christian, libertarian, and socialist thinking. The Egalitarian philosophy promoted egalitarianism. Egalitarianism claims that society should aim to achieve equality for all people and distribute income and wealth equally. In the sense of healthcare, egalitarian theory notes that healthcare financing should be focused on willingness to pay, and healthcare distribution should be based on the need for ill health. On these foundations, a common equity concept is "fair access for all," and countries could use various methods to achieve this goal.

2.6 Empirical Literature

John, Agada-Amade, Oyibo, and Ugwu (2015) investigated the effect of health insurance on access to facilities and the quality of primary healthcare in Nigeria. The study found moderate-to-strong evidence that health insurance enhances access to treatment and improves the standard of care provided.

The Kakwani index was used by Almasiankia, Kavosi, Keshtkaran, Jafari, and Goodarzi (2015) to measure Iran's health system financing equity in rural and urban areas between 2001 and 2010. The research was based on annual household expenses and an income survey performed by Iran's statistical centre (SCI). The Kakwani index was negative in the report, suggesting that out-of-pocket payments are regressive in rural and urban households. However, in insurance premium payments, the Kakwani index was optimistic, suggesting that premium payments for health insurance in rural areas are progressing. The dominance test (T-test) for the concentration curves of out-of-pocket payments in both areas dominated the Lorenz curve in both years. Still, the dominance test (T-test) for health insurance premium payments did not indicate a clear pattern over the study period.

Chen, Fang, Wang, Wang, Zhao, and Si (2015) looked at how the benefits of government healthcare subsidies were distributed in China. According to the report, government healthcare premiums are allocated inequitably, with high-income people benefiting most from the subsidized healthcare system. It was also discovered that higher healthcare subsidies were concentrated among the wealthy, with little evidence of inequality-reducing effects. Rashad and Sharaf (2015) used data from the Egypt Demographic and Health Survey and the Egypt National Health Accounts to perform a Benefit Incidence Analysis to analyze the allocation of public healthcare subsidies. Outpatient, inpatient, and overall healthcare concentration and Kakwani indices were also measured. The findings

revealed that subsidies related to university hospitals were pro-rich and increased inequality. In contrast, subsidies offered by the Ministry of Health and Population for outpatient and inpatient treatment were not pro-poor and were only weakly progressive (had inequality reducing effect).

3. METHODOLOGY

3.1 Source of the Data

The National Bureau of Statistics National Living Standard Survey is the source of the data for this report. It's a large-sample, nationally representative household survey (usually between 5,000 and 30,000 households).

3.2 Model Specification

We used the Dagum (1997) method for decomposition of the Gini coefficient to decompose the Gini coefficient based on gender and states in Nigeria to capture the study's objectives. Let hi i= 1, . . ., n represent healthcare financing units in the population P of size n, following Kaya & Senesen (2009) with minor modifications (since their analysis does not explicitly relate to healthcare financing). F(h), u, and G represent the cumulative healthcare financing function, mean healthcare financing, and Gini coefficient, respectively. We divided the population, P, into k groups based on their socioeconomic properties to capture healthcare financing inequity by gender in Nigeria and differences in healthcare financing equity among states in Nigeria in our mined (gender and states in Nigeria). Given n_j to be the size and u_j (j = 1, …, k) to be the mean healthcare financing of the j^{th} group of the population (Pj), the Gini coefficient for (Pjs) is:

$$G = \frac{\sum_{i=1}^{n}\sum_{r=1}^{n}|h_i - h_r|}{2n^2u} \quad . \quad . \quad .(1)$$

The Gini coefficient for the subpopulation, P_j (within Gini coefficient), is:

$$G_{jj} = \frac{\sum_{i=1}^{n_j}\sum_{r=1}^{n_j}|h_i - h_r|}{2n^2u} \quad . \quad . \quad .(2)$$

The between-group Gini coefficient, on the other hand, which captures inequity between two subpopulations, is presented as:

$$G_{jv} = \frac{\sum_{i=1}^{n_j}\sum_{r=1}^{n_v}|h_{ji} - h_{vr}|}{n_j n_v\,(u_j + u_v)}. \quad . \quad .(3)$$

The weight is the population share, and the healthcare expenditure share for the subpopulation P_j is presented as:

$$P_j = \frac{n_j}{n} \text{ and } s_j = \frac{n_j u_j}{nu}. \quad . \quad .(4)$$

Following Kaya & Senesen (2009), the gross economic affluence between j^{th} and v^{th} groups, where $u_j > u_v$ and $h_{ji} > h_{ji}$is:

$$d_{jv} = \int_0^{\infty} dF_j(h) \int_0^{h} (h - x) dF_v(x) \quad .(5)$$

Equation (3) uses the differences between all healthcare financing pairs x_{ij} - xrv just for each x_{ij} of the j^{th} group is higher than x_{rv} of v^{th} group, given that the mean healthcare financing of the j^{th} group is higher than the mean healthcare financing of the v^{th} group.

The first-order moment of transformation, which indicates the healthcare financing differences between the j^{th} and v^{th} groups, is presented as:

$$P_{jv} = \int_0^{\infty} dF_v(h) \int_0^{h} (h - x) dF_j(x) \quad .(6)$$

According to equations (5) and (6), the normalized measure of the distance between two subpopulations (relative economic affluence) is:

$$D_{jv} = \frac{(d_{jv} - P_{jv})}{(d_{jv} + P_{jv})}. \quad . \quad . \quad (7)$$

The net between-group Gini coefficient is defined as:

$$G^{nb} = \sum_{j=2}^{k}\sum_{v=1}^{j-1} G_{jv} D_{jv} (P_j s_v + P_v s_j) (8)$$

G^{nb} is a measure of the inequity in the non-overlapping area of the healthcare financing distribution of the j^{th} and v^{th} groups. Equation (8) indicates the net contribution of between-groups inequity to total healthcare financing inequity.

The inequity determined from the overlapping of the jth and vth groups (the contribution of the strength of trans-variation between groups, Gt) is as follows:

$$G^t = \sum_{j=2}^{k}\sum_{v=1}^{j-1} G_{jv}(1 - D_{jv})(P_j s_v + P_v s_j) \quad (9)$$

In the overlapping field of subpopulations' healthcare financing distributions, Gt is the inequity between healthcare financing pairs. The sum of the net between-group Gini coefficient and the contribution of the intensity of trans-variation between-groups

is the total between-group Gini coefficient. This is shown as:

$$G^{gb} = G^{nb} + G^{t} \quad . \quad . \quad .(10)$$

Equation (10) shows that, unlike the decomposition of generalized entropy indices, the between-group healthcare financing inequity is extracted from all healthcare financing units, not just the healthcare financing means. Whereas the within-group Gini coefficient G^w is:

$$G^{w} = \sum_{j=1}^{k} G_{jj} P_j s_j \quad . \quad . \quad .(11)$$

As a result, for a population of P with n healthcare financing units, nj (j = 1,..., k), which is divided into k subpopulations (healthcare financing inequity by gender in Nigeria and the variations in healthcare financing equity among states in Nigeria), the Gini composition in two terms is presented as:

$$G = G^{w} + G^{nb} \quad . \quad .(12)$$

The complete Gini coefficient is the number of the two components in this Gini decomposition technique. While the Gini decomposition in three terms for a population P with n income units nj (j = 1, k) that is partitioned into k subpopulations is as follows:

$$G = G^{w} + G^{nb} + G^{t} \quad . \quad . \quad .(13)$$

3.3 Estimation Technique

In this study, the empirical variance estimation technique (the covariance-formula estimator) is used based on the maximum likelihood theory. This technique is suitable if a theoretical model represented by a probability density function, f(x,), will approximate an empirical healthcare expenditure distribution. The variances of maximum likelihood estimators are given by the Cramer-Rao bound and are asymptotically unbiased and normally distributed (Jędrzejczak, 2010).

4. RESULTS

4.1 Descriptive Statistics of the Variables

The respondents' characteristics considered in this study are age, gender, marital status, and household. The distribution of the respondents' characteristics is reported in Table 1 below:

Table 1: Descriptive Statistics of the Variables

	ABIA		ANAMBRA		EBONYI		ENUGU		IMO		SEZONE	
	Freq.	**%**	**Freq.**	**%**	**Freq.**	**%**	**Freq.**	**%**	**Freq.**	**%**	**Freq.**	**%**
Gender												
male	491	85.54	424	83.46	487	85.44	446	82.59	434	85.94	2,282	84.61
female	83	14.46	84	16.54	83	14.56	94	17.41	71	14.06	415	15.39
Total	**574**	**100**	**508**	**100**	**570**	**100.00**	**540**	**100**	**505**	**100**	**2,697**	**100**
Age group												
25-29 years	1	0.17	-	-	2	0.35	3	0.56	4	0.79	10	0.37
30-34 years	9	1.57	8	1.57	17	2.98	16	2.96	10	1.98	60	2.22
35-39 years	44	7.67	33	6.50	37	6.49	36	6.67	28	5.54	178	6.60
40-44 years	64	11.15	52	10.24	59	10.35	65	12.04	45	8.91	285	10.57
45-50 years	68	11.85	63	12.40	62	10.88	61	11.30	57	11.29	311	11.53
51-54 years	64	11.15	71	13.98	82	14.39	70	12.96	67	13.27	354	13.13
55-59 years	74	12.89	53	10.43	90	15.79	70	12.96	70	13.86	357	13.24
60-64 years	78	13.59	52	10.24	55	9.65	63	11.67	57	11.29	305	11.31
65-69 years	42	7.32	39	7.68	33	5.79	30	5.56	42	8.32	186	6.90
70 and above	130	22.65	137	26.97	133	23.33	126	23.33	124	24.55	650	24.10
Total	**574**	**100**	**508**	**100**	**570**	**100**	**540**	**100**	**505**	**100**	**2,697**	**100**
Marital status												
monogamous	359	62.54	313	61.61	347	60.88	310	57.41	313	61.98	1642	60.88
polygamous	82	14.29	82	16.14	87	15.26	91	16.85	71	14.06	413	15.31
informal union	2	0.35	2	0.39	1	0.18	2	0.37	-	-	7	0.26
divorced	3	0.52	5	0.98	6	1.05	8	1.48	4	0.79	26	0.96
separated	20	3.48	12	2.36	19	3.33	18	3.33	14	2.77	83	3.08
widowed	64	11.15	62	12.20	74	12.98	67	12.41	66	13.07	333	12.35
never married	44	7.67	32	6.30	36	6.32	44	8.15	37	7.33	193	7.16
Total	**574**	**100**	**508**	**100**	**570**	**100**	**540**	**100**	**505**	**100**	**2,697**	**100**
Household size												
1-5 persons	149	25.96	121	23.82	152	26.67	155	28.70	149	29.50	726	26.92
6-10 persons	223	38.85	225	44.29	223	39.12	198	36.67	200	39.60	1069	39.64
1-15 persons	100	17.42	82	16.14	111	19.47	115	21.30	82	16.24	490	18.17
15 and above	102	17.77	80	15.75	84	14.74	72	13.33	74	14.65	412	15.28
Total	**574**	**100**	**508**	**100**	**570**	**100**	**540**	**100**	**505**	**100**	**2,697**	**100**

Source: Authors' Computation

The Table shows that the females are 415, representing 15.39 per cent of the total respondents, while the males are 2282, representing 84.61 per cent of the total respondents. The analysis, therefore, shows that there were more males respondents than females respondents. The females are 83, 84, 83, 94 and 71, representing 14.46, 16.56, 14.56, 17.41 and 14.06 per cent respectively for Abia, Anambra, at the states level Ebonyi, Enugu and Imo states. The males are 491, 424, 487, 446, and 434, representing 85.54, 83.46, 85.44, 82.59 and 85.94 per cent respectively for Abia Anambra, Ebonyi, Enugu and Imo states. This confirms that at the states level, there were more males respondents than females respondents.

As regards the respondents' age range, 10 or 0.37 per cent of the respondents were between the age range 25 - 29 years, 60 or 2.22 per cent were between the age range 30 – 34 years, 178 or 6.60 per cent were between the age range 35 – 39 years, 285 or 10.57 per cent were between the age range 40 - 44 years and 311 or 11.53 were between the ages of 45 and 49 years old. Those between the age range of 50 - 54 years were 354 or 13.13, 55 - 59 years were 357 or 13.24, and 60 - 64 years were 305 or 11.31 per cent. 186 or 6.90 per cent were between the age range of 65 - 69 years, while 650 or 24.10 per cent were between the age range of 70 years and above. Therefore, most of the respondents were between the age range of 70 years and above. At the states level, the majority of the respondents, 130 or 22.65 per cent, 137 or 26.97 per cent, 133 or 23.33 per cent, 126 or 23.33 per cent and 124 or 24.55 per cent were between the age range of 70 years and above respective for Abia, Anambra, Ebonyi, Enugu and Imo states.

4.2 Healthcare financing inequity by gender

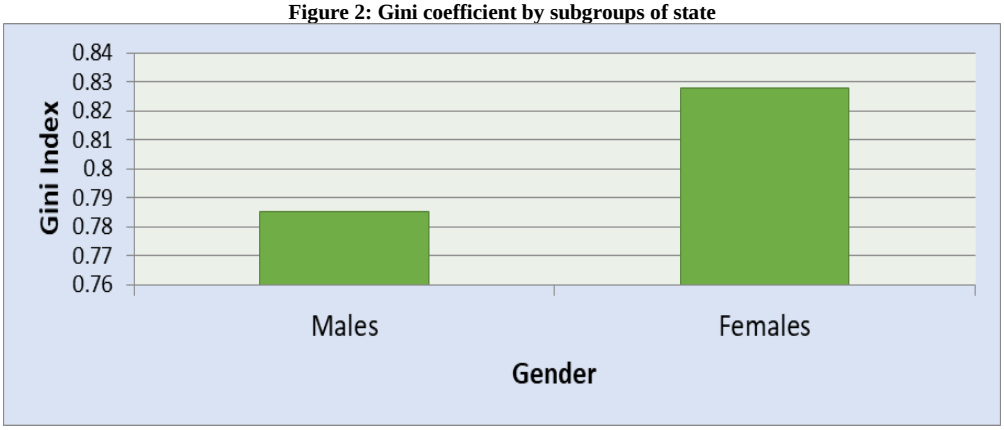
To determine the healthcare financing inequity by gender, the population, P was partitioned into k groups based on gender. The Dagum (1997) approach for decomposition of the Gini coefficient was employed to decompose the Gini coefficient based on healthcare financing by gender. The Gini coefficient is the first way that gender disparities in healthcare financing are tested. The result is reported in Table 2, and a bar chart of the Gini coefficient by subgroups of the state is presented below.

Table 2: Healthcare financing inequity by gender

Gini coefficient by subgroups of state		
K	Male	Female
Gini_k	0.785	0.828
Inequity decomposition		
	Coefficient	Part.
Between-group Gini	0.002	0.222
Overlap	0.211	26.542
Within-group Gini coefficient	0.581	73.236
Total Gini	0.793	100.000

Source: Authors' computation

Figure 2: Gini coefficient by subgroups of state



Source: Authors' plot

The Gini coefficient for this distribution is 0.793. This means that the total healthcare financing inequity for men and women in Nigeria is very high. The decomposed Gini

coefficient based on healthcare financing by gender showed a decomposed Gini value of 0.785 for males and 0.828 for females. This is an indication that there is a very high gender healthcare financing inequity in Nigeria. That is, healthcare financing inequity exists among men and women in Nigeria. The healthcare financing inequity difference between the two groups is 0.002 or 0.22%.

4.3 Variations in Healthcare Financing Equity among States in Nigeria

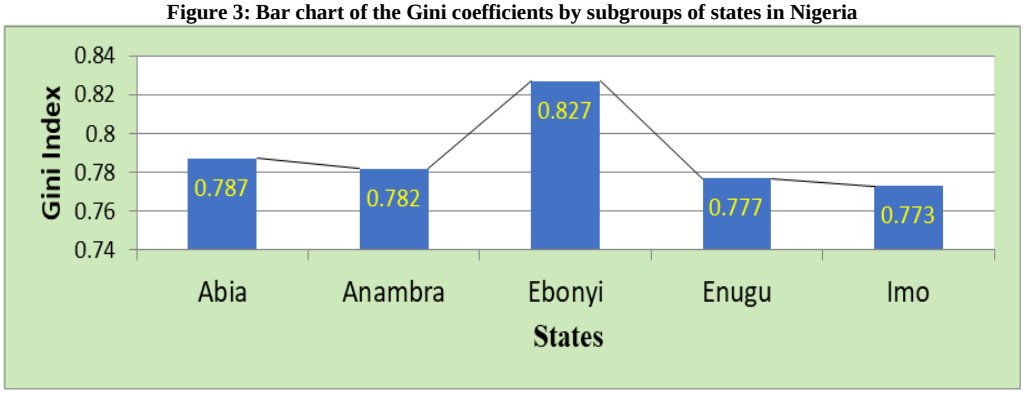
Variations in healthcare financing equity among states in Nigeria were also examined. The population, P, was partitioned into k groups based on states in Nigeria. The Dagum (1997) approach for decomposition was employed to determine the healthcare financing equity differences among the states. The result is reported in Table 3, and a bar chart of the Gini coefficients by subgroups of states in Nigeria is presented in figure 2 below.

Table 3: Healthcare financing differences among the states in Nigeria

Gini coefficient by subgroups of states					
k	ABIA	ANAMBRA	EBONYI	ENUGU	IMO
Gini_k	0.787	0.782	0.827	0.777	0.773
Inequity decomposition					
	Coefficient		Part.		
Between-group Gini	0.076		9.591		
Overlap	0.557		70.230		
Within-group Gini coefficient	0.160		20.179		
Total Gini	0.793		100.000		

Source: Authors' computation

Figure 3: Bar chart of the Gini coefficients by subgroups of states in Nigeria



Source: Authors' plot

The Gini coefficient for this distribution is 0.793. This means that there is a very high total healthcare financing inequity for states in Nigeria. The decomposed Gini coefficient based on healthcare financing by states showed a decomposed Gini value of 0. 0.787, 0.782, 0.827, 0.777 and 0.773 for Abia, Anambra, Ebonyi, Enugu, and Imo states. This result shows that there are variations in healthcare financing inequity between states in Nigeria. The between-group Gini coefficient is 0.076. Although it is quite low, its contribution to the total healthcare financing inequity is 9.6 per cent. Ebonyi state has the highest healthcare financing inequity among the selected states. This is followed by Abia and Anambra states. The state with the least healthcare financing inequity is Imo state.

5. CONCLUSION

The study has shown that the healthcare financing system in Nigeria is regressive - indicating an unfair healthcare payment system that impoverishes households in Nigeria. The healthcare financing system can place households just above the poverty line on poverty and those already in poverty to get deeper into it. Gender inequity in healthcare financing also exists in Nigeria, putting males on health payment advantage over females. States in Nigeria also vary in

healthcare financing equity, which confirms that healthcare is differently financed in proportion to households' ability to pay, indicating that at the specific states level, households that cannot afford to pay are denied quality and equitable healthcare services. Different population groups are covered to achieve the broader equity and effectiveness goals when implementing healthcare financing reforms. Furthermore, governments in various states should step up efforts to assist disadvantaged and oppressed communities, such as poor indigenous people, in terms of healthcare utilization, which could reduce the healthcare financing burden.

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