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Health Personnel and the Implementation of National Health Insurance Scheme (NHIS) in Federal Capital Territory, Abuja, Nigeria

Ikechukwu Joseph Okafor[1], Abdulhamid Ozohu-Suleiman[2]

[1] Department of Public Administration, University of Abuja. Email: ikennaiyk@yahoo.com
[2] Department of Public Administration, University of Abuja

Abstract
Acknowledged as a policy target for the government of Nigeria, healthcare provision represents an important preoccupation for the government. As with other public policies, the achievement of policy goals in Nigeria is usually encumbered by numerous factors of implementation across various sectors. In the health sector, factors such as inadequate physical infrastructure, shortage of healthcare personnel, limited medical supplies etc. have hindered the implementation of several health policies. National Health Insurance Scheme (NHIS) is one of such policies and this study examined the effects of shortage of healthcare personnel on the implementation of NHIS policy in FCT, Abuja. Specifically, the study evaluated the opinions of health workers as well as enrollees of NHIS in four purposively chosen Area Councils of the six Area Councils in FCT. This study adopted a survey research design with Rensis Likert's five-point scale questionnaire instrument administered to both categories of respondents. The data were analyzed using the Statistical Package for Social Sciences (SPSS Version 25) and the T-tested statistical tool was used to test the hypothesis. The study found out that shortage of health personnel is a major barrier to the effective implementation of NHIS in the FCT, Abuja. Consequently, the study recommends that there should be massive recruitment of qualified healthcare personnel; training and retraining of healthcare workers; and timely and adequate remuneration for the healthcare workers in FCT, Abuja.

Keywords: Healthcare, NHIS, Health Personnel, Public Policy

Introduction

Research in health policies and their implementation has been a recurring decimal in extant literature. This preoccupation is not unconnected with the fact that investment in human capital through health is indispensable to national development. Good health boosts worker effectiveness, as well as the productivity of the worker through increased physical and mental capacities which are necessary for accelerating the pace of national development. Although the provision of health services is seen as a social good in some countries, in many others however (especially in developing countries), access to health is a big issue as it is fraught with difficulties with respect to issues of financing and cost recovery for services provided and received. Consequently, like many public services, it is not equally accessible to all people and so, limited physical access to basic health care continues to be a major

impediment to achieving the goal of healthcare for all. In the light of the forgoing, governments all over the world consciously attempt through policy formulation and implementation to bring effective health care services to people across economic divides and different social strata.

In 2005, the World Health Organization (WHO) passed a resolution that social health insurance should be supported as one of the strategies used to mobilize more resources for health, for risk pooling, for increasing access to health care for the poor and for delivering quality health care in all its member states and especially in low-income countries, a strategy also supported by the World Bank (Hsiao, 2007). This is one of the ideals upon which the National Health Insurance Scheme (NHIS) was conceived and established in Nigeria.

The National Health Insurance Scheme (NHIS) is an offshoot of the Nigerian National Health Policy (NHP) and it was established by Decree 35 of 1999 (Now Act 35) and became operational in 2005. It is a social health insurance programme designed by the Federal Government of Nigeria to complement sources of financing the health sector and to improve access to health care for the majority of Nigerians (Mbaya, 2009). It guarantees the provision of needed health services to persons without them having to pay fully at the time of need, because payment has previously been made by regular contribution from the insured or his employer or both. The scheme is statutorily mandated to ensure that Nigerians have access to affordable health care regardless of their social status. The implementation of this scheme has become a subject of several empirical evaluations. This study seeks to extend these empirical investigations by examining specifically the shortage of healthcare workers as a critical component of the militating factors against the achievement of the NHIS goals in FCT Abuja between 2005 and 2015.

Access to Healthcare under the NHIS

NHIS was launched and became operational in 2005 and has as its fundamental objectives, the achievement of effective, accessible, affordable and Universal Health Coverage (UHC) for Nigerians by the year 2015. In Nigeria, there is a past trend of ineffective implementation of government schemes. This has informed a general negative perception and attitude among the people towards such schemes regarding their success, effectiveness and sustainability (Enoh, 2011). A study conducted by Hafsah and Saidu (2016) revealed that in terms of coverage, between the year 2005 when the scheme became operational and 2015 which was the target year for the attainment of its fundamental objectives of effective, accessible, affordable and UHC for Nigerians, it was only able to cover 5.5% of the national population which is equivalent to Eleven Million, five hundred and fifteen thousand, one hundred and sixty-four (11,515,164) people. But more pathetically, this 5.5% covered came mainly from employees of the formal sector (particularly employees of the federal government who made up to 98% of the coverage so far (see FGN, 2015), while artisans, farmers, street vendors, traders and the unemployed remain largely out of the coverage. The implication, according to Felix and Uno (2016) is that most public and private health facilities are still operating on fees for service for the majority of its clients.

Again, providing effective, accessible and affordable health care to those who are already enrolled into the NHIS has also remained a serious challenge (Inoughele and Mohammed, 2013; Owumi and Sakiru, 2013). And more importantly, Federal Government of Nigeria (FGN (2015) had actually corroborated the findings from other studies, when it reported that some challenges confronting the implementation of the NHIS during its decade of existence include (a) exclusion of certain categories of people in its benefit package; (b) low coverage across the country due to low health-seeking behavior; (c) low uptake by states and local government employees; (d) limit of free health protection programme for the poor and vulnerable; and (e) weak stakeholder responsibility.

Scholars have identified many factors resulting from implementation of the policy to be responsible for these challenges. Some scholars have tended to generalize these challenges to the entire health sector regardless of which sub-sector is being investigated. For example again, some scholars have identified the problems of shortage of health personnel, inadequate medical equipment, lack of drugs and consumables, poor health infrastructure, paucity of funds and hospital bureaucracy as major challenges confronting the entire health sector regardless of the uniqueness of some sub-sectors such as the NHIS.

On the issue of health personnel (health workers), one big challenge some scholars argue lies in the shortage of health workers to handle the quantum of health needs of the people especially in rural communities. Even in the urban centres, where medical facilities are relatively better, the number of patients to one doctor is very high. There are cases where patients wait for several hours to consult a doctor. Others can stay for about two days without accessing a doctor owing to the crowd and pressure on available medical personnel (Felix and Uno, 2016). Associated with this, is the attitude of health workers towards patients. As a result of pressure that is engineered by the high number of patients, there exists the tendency of health workers exhibiting uncaring, unfriendly and unkind attitudes towards their patients. A study conducted by WHO (2007) corroborated this. It identified gross shortage of personnel as one of the serious problem bedeviling the Nigerian health sector. In a similar vein, Ele, Ogbonna, Ochei and Odili (2017) also identified poor attitude of health personnel towards patients (enrollees) which is caused by pressure as a result of inadequacy of personnel as one of the major factors affecting the effective implementation of the scheme in South-Eastern Nigeria. Jegede (2014) also discovered poor attitude and lack of professional commitment of health workers as a major problem in Nigerian health care delivery system. This study, therefore, examines the extent to which shortage of healthcare personnel has been a major impediment to achieving the objectives of NHIS in FCT Abuja.

Theoretical Framework

This study adopted Anderson's health behaviour theory because of its compatibility with the study's objective. Andersen (1968) developed a theory of health care utilization which looks at three categories of determinants for health care service utilization. These include: (i) predisposing characteristics, (ii) enabling characteristics and (iii) need-based characteristics.

(i) *Predisposing Characteristics:* This category represents the proclivity to utilize health care services. According to Andersen (1968), health care utilization is determined by certain predisposing factors which include demographic factors such as age, sex, etc; social structure such as education, occupation, ethnicity, social network, social interactions and culture. The social position of an individual within the society in terms of aforementioned factors determines access to and use of health services. Another element of the predisposing characteristics is the health belief factors which include attitudes, values and knowledge that people have concerning and towards the health care system. An individual who believes health services are useful for treatment will likely utilize those services, than one who does not.

(ii) *Enabling Characteristics:* This category according to Andersen includes resources found within the family, community and health facility levels. Family or personal resources include income, health insurance coverage, location and quality of social relationships. The first two factors-income and health insurance coverage are particularly important because the level of family or personal income determines the amount of money that would be available to take care of health expenditure. Also health insurance coverage enhances an individual's access to and use of health services. Resources at the community level include available health facilities, health personnel and medical equipment. Health facilities, including health infrastructure must be present for use to take place. Also health personnel and medical equipment must be available within the health facilities for effective utilization of health care services. Adequate availability of health personnel and medical equipment reduces a patient's waiting time and thereby improving health care services utilization.

(iii) *Need-based Characteristics:* The third category of Andersen's health behavioural theory includes the perception of need for health services and evaluated perceptions of need. According to Andersen (1968), perceived need is how people view their own general health and functional state, as well as how they experience symptoms of illness, pain and worries about their health and whether or not they judge their problems to be of sufficient importance and magnitude to seek professional help and evaluated perception of need represents professional judgment about people's health status and their need for medical care.

The underlying assumptions of Andersen's behavioural theory of health care services utilization is congruent with the objective and thrust of this paper which examines the extent to which shortage of health personnel militate

against the successful implementation of NHIS in FCT. Community, family or personal enabling resources must be available for health care utilization to take place. First, community resources like health facilities must be available and these facilities must have the required personnel for adequate health care services utilization. Also families or individuals must have the means and know-how to access and use health care services. These include availability of income, health insurance coverage and regular source of care. Where these are lacking or inadequate, health care utilization is bound to be low.

Empirical Review of Literature

A study conducted by Agba, Ushie and Osuchukwu (2010) investigated the potency of NHIS and employee's access to quality and affordable healthcare in Cross River State involving 1200 respondents. The study employed survey research method involving questionnaire to collect the data, and utilized ANOVA and student t-test to test the hypotheses. The authors revealed that there is a gross inadequacy of personnel and equipment for providing services to NHIS beneficiaries in Cross River state. The study concluded that the utilization of NHIS remains a mirage if these problems were not adequately addressed. Agba et al. (2010) failed to describe how the inadequacy of personnel and equipment constrains the utilization of the NHIS by employees sampled in the Federal, State and Local services.

Akande, Salaudeen and Babatunde (2012) examined the effects of NHIS on hospital staff, financial burden and satisfaction with services rendered in University of Ilorin Teaching Hospital Staff Clinic involving 29,422 patients. The study employed cross-sectional research design and used chi-square and t-test statistical tools to test hypotheses of the study. They found out that there is disparity among junior and senior staff with respect to the level of satisfaction of NHIS services. While majority of the junior staff were satisfied with the utilization of NHIS, the senior staff were not satisfied. The study showed that certain personnel or individual-related factors impede the utilization of NHIS services. They concluded that NHIS is highly necessary to reduce financial burden of illnesses. A critical look at Akande et al. (2012) reveals that they only reported opinion from a single sampled government institution. There is need to expand the scope of the sampled institutions.

A study by Owoseni, Jegede and Ibikunle (2014) examined the influence of socio-economic status on utilization of healthcare facilities, as well as ascertain the quality of healthcare facilities available in the rural communities in South-West Nigeria. The study adopted both the Rational Choice Theory (RCT) and Health Belief Model as theoretical framework. Methodologically, the study employed a descriptive research survey with a sample size of 400 people selected through a random sampling technique. After administering the questionnaire, a total of 357 copies of the questionnaires were retrieved. The hypotheses were tested with chi-square and Correlation to investigate the relationship between the variables. The outcome of the study indicates that most of the respondents (95.8%) agreed that they had utilized health facility, while 4.2% of the respondents had not utilized health facility. The correlation result R = - 0.221 (0.000) shows that there was a significant and negative relationship between education and utilization of health facility.

Lastly, a study carried out by Awoyemi, Obayelu and Opaluwa (2009) investigated the factors influencing the utilization of health facilities in rural area of Kogi state. 160 rural households and 60 health care providers were randomly selected for the study. Using a multi-nominal logic, the study revealed that household size, distance and total cost of seeking health care affect the utilization of health services. The study concluded that distance and cost of seeking health care are core issues in the utilization of health services. One limitation of the study is that the scope was limited. For example, the study did not consider other factors especially how shortage of personnel affect the effective utilization of health care services in the state.

About the NHIS

The National Health Insurance Scheme (NHIS) is a body corporate established under Act 35 of 1999 by the Federal Government of Nigeria to ensure access to health care by all Nigerians at an affordable cost. James (2003) defined the National Health Insurance Scheme as a social health insurance programme designed by the Federal

Government of Nigeria to complement sources of financing the health sector and to improve access to health care by the majority of Nigerians. It is a form of social health insurance which pays for health care services through contributions to a health fund. Contributions, which are usually from both employers and employees, are based on payroll and ability to pay while access to services is based on need. The fundamental rationale for health insurance is risk-sharing. According to James (2003), the programme aims at:

a. Ensuring that every Nigerian has access to good health care services.
b. Protecting families from the financial hardship of huge medical bills.
c. Limiting the rise in the cost of health care services.
d. Ensuring equitable distribution of health care costs among different income groups.
e. Maintaining high standard of health care delivery services within the system.
f. Ensuring efficiency in health care services.
g. Improving and harnessing private sector participation in the provision of health care services.
h. Ensuring equitable distribution of health care facilities within the federation.
i. Ensuring the availability of funds to the health sector for improved services; and
j. Ensuring equitable patronage of all levels of health care.

The National Health Insurance Scheme was launched formally as a Public Health Policy in 1997. The government recognizing the importance of the scheme as a good opportunity for mobilizing additional resources towards financing the health sector showed some political commitment by embarking on public enlightenment/ official launching of the scheme in the various geo-political zones, preparatory to its take off. According to Okonkwo (2001), National Health Insurance Scheme (NHIS) has been introduced in Nigeria in response to inadequate provision of health facilities, the general poor state of the nation's health care services, the excessive dependence and pressure on government-provided health facilities, the inadequate participation of private health services coupled with inappropriate distribution of both public and private facilities in the country, low income per person, the country's poor health indices, and its large population. The scheme is at the initial phase of transition to universal coverage in Nigeria. As a complementary or alternative source of health care financing, Mohammed (2008) reported that National Health Insurance Scheme has become important in developing countries. According to him, it is implemented as part of health reform programmes and strategies towards providing effective and efficient health care for all citizens, most especially the poor and the vulnerable populace. Mohammed further reported that the Scheme which aims at providing risk-sharing in health expenditures through the contribution of enrolled members is at the tail-end of its first-phase in Nigeria.'

As part of the health sector reform, the Scheme's vision is "a strong, dynamic and responsive government parastatal (Agency) that is totally committed to securing universal coverage and access to adequate and affordable health care in order to improve the health status of Nigerians, especially for those participating in the various programmes/products of the scheme. The mission of the Scheme is to facilitate fair-financing of health care costs through pooling and judicious utilization of financial resources to provide financial risk protections and cost-burden-sharing for people against high cost of health care, through various prepayment(s) programmes/products prior to their falling ill (NHIS Annual Report, 2006).

Methodology of the Study

This study adopted a survey research design with Rensis Likert's five-point scale questionnaire as major instrument of data collection. This study however, made use of both secondary and primary sources of information. Secondary information was obtained through a review of existing literature relevant to implementation of NHIS in Nigeria. The primary data were generated through a questionnaire instrument which was distributed to stakeholders in the implementation of NHIS in FCT. The five-point Likert scale questionnaire provides five options with their numerical values as follows: Very High Extent (VHE **5**), High Extent (HE **4**), Undecided (U **3**), Low Extent (LE **2**) and Very Low Extent (VLE **1**). For purpose of decision, the average of this Likert five-point scale is calculated as:

$$\overline{X} = \frac{5+4+3+2+1}{5} = \frac{15}{5} = 3.0$$

The value of $\overline{X}$ is 3.0 which represents the cut-off along the Likert five-point scale for decision making. The decision rule is therefore given as follows: On the one hand, if a mean score of a statement is 3.0 and above, the decision is positive. This means that the mean score lies on the high to very high extent side of the continuum. And on the other hand, if a mean score of a statement is below 3.0, the decision is negative. This means that the mean score lies on the low to very low extent side of the continuum.

The stakeholders are of two groups - institutional and public. The institutional stakeholders are the health workers who are the primary focus of the study and are in a position to report the situation in healthcare centres, while the second group of stakeholders - the public population are the enrollees of NHIS who are the intended beneficiaries of the Scheme and are in a position to evaluate the availability of personnel in healthcare centres. Table 1 below shows the breakdown of the stakeholders who together form the population of this study.

Table 1: Population of Health Workers and NHIS Enrollees across the selected Area Councils and Health care providers in FCT

Area Council	**Health care Provider**	**Health Workers**	**NHIS Enrollees**
AMAC	National Hospital	1369	22,000
	Wuse General Hospital	253	5926
	Nyanya General Hospital	177	8,892
Gwagwalada	UATH	857	30,892
	Gwagwalada Town Hall Clinic (PHC)	27	2,151
Kwali	Kwali General Hospital	99	2685
	Kwali PHC	14	472
Kuje	Kuje General Hospital	126	2533
	Kuje PHC	23	398
	Total	**2,945**	**75,250**

Source: *-National Hospital (2017)*
-Wuse General Hospital (2017)
-Nyanya General Hospital(2017)
UATH, (2017)
Gwagwalada Town Hall Clinic (2017)
-Kwali General Hospital (2017)
-Kwali PHC (2017)
-Kuje General Hospital (2017)
-Kuje PHC (2017)

The study adopted Taro Yamani's formula and proportional sampling technique to determine the sample size of the respondents. These allow for fair representation of the population. The details are presented below:

Determination of Sample Size of Health Workers based on the total Population of 2,945

Using Taro Yamani's formula =

$$n = \frac{N}{1+N(e)^2}$$

Where n = Sample Size
N = Population Size (2,945)
e = Level of Significance (0.05)
I = Constant

Therefore, $n = \frac{2,945}{1+ 2,945\ (0.05)^2}$

$$= \frac{2,945}{1+ 2,945\ (0.0025)^2}$$

$$= \frac{2945}{1+7.362} \qquad = \frac{2945}{8.3625} \qquad = 352$$

Total Sample Size of all Health Workers = 352

Table 2: Sampled population of Health Workers and NHIS Enrollees across the Selected Area Councils and Health care Providers in FCT

Area Council	**Health care Provider**	**Population of Health Workers**	**Sample size of Health Workers** $\frac{SP * SS}{GP}$	**Population of NHIS Enrollees**	**Sample Size of NHIS Enrollees** $\frac{SP * SS}{GP}$
AMAC	National Hospital Wuse General Hospital Nyanya General Hospital	1369 253 177	164 30 21	22,000 5926 8892	116 31 47
Gwagwalada	UATH Gwagalada Town Hall Clinic (PHC)	857 27	102 3	30,193 2,151	160 12
Kwali	Kwali General Hospital Kwali PHC	99 14	12 2	2685 472	14 3
Kuje	Kuje General Hospital Kuje PHC	126 23	15 3	2533 398	13 2
	Total	**2,945**	**352**	**75,250**	**398**

Determination of Sample Size of Enrollees based on total Population of 75,250

Using Taro Yemani's formula =

$$n = \frac{N}{1+N(e)^2}$$

$$= \frac{75,250}{1+ 75,250\ (0.0025)^2}$$

$$= \frac{75,250}{1+ 188.125}$$

$$= \frac{75,250}{189.125} = 398$$

Total Sample Size of Enrollees = 398

The study also utilized proportional sampling technique to determine the sample size for each study unit according to the strength of their contribution to the general population of the respondents' category. The formula for this proportional allocation is given as:

$$\frac{SP * SS}{GP}$$

Where SP= Specific Population of a Study Unit
SS= Sample Size of Respondents' Category
GP= General Population of Respondents' Category

Data generated from the questionnaire instrument were analyzed using Version 25 of Statistical Package for Social Science (SPSS) and independent two-sample t-test was used to test the hypothesis.

Data Presentation and Interpretation

Out of the 352 copies of questionnaire distributed to Healthcare workers only 311 copies were retrieved and found usable; and of the 398 copies of the questionnaire distributed to NHIS enrollees, only 361 copies were returned and found usable. Therefore analysis of data was based on the retrieved copies of the questionnaire.

Table 3 below presents the item by item descriptive analysis of NHIS enrollees and health workers' response to the statements on the extent to which shortage of health personnel affects the effective implementation of NHIS in FCT.

Table 3: Descriptive Analysis of the Extent to Which Shortage of Health Personnel Affects the Effective Implementation of NHIS in FCT

S/N	Statement	Category	Response Categories					Total	Mean score	Decision
			VHE (5)	HE (4)	U (3)	LE (2)	VLE (1)			
1.	Inadequacy of health personnel compared to enrollees.	**NE** **HW**	226 9	90 8	24 34	16 160	5 100	361 311	4.43 1.93	High extent Very Low extent
2.	Inadequacy of health personnel affecting effectiveness of service.	**NE** **HW**	191 129	133 94	22 23	12 49	3 16	361 311	4.38 3.87	High extent High extent
3.	Pressure occasioned by shortage of health personnel creating unfriendly attitude towards enrollees.	**NE** **HW**	212 128	102 83	28 26	15 57	4 17	361 311	4.39 3.79	High extent High extent
4.	Preferential treatment given to non-NHIS enrollees because of out-of-pocket payments made by them.	**NE** **HW**	173 98	145 108	19 39	16 59	8 7	361 311	4.27 3.74	High extent High extent
5.	Lack of professional commitment among available health personnel increasing poor service delivery to NHIS enrollees.	**NE** **HW**	156 80	158 80	24 47	17 77	6 27	361 311	4.22 3.35	High extent High extent
6.	Work pressure on health personnel increasing enrollees' waiting time to be served.	**NE** **HW**	165 72	152 80	20 36	16 101	8 22	361 311	4.25 3.25	High extent High extent
7.	Due to inadequacy of health personnel, non-doctors and nurses oftentimes attend to health needs of enrollees.	**NE** **HW**	159 74	140 114	28 28	23 78	11 17	361 311	4.14 3.48	High extent High extent
8.	Many inexperienced (but qualified) health personnel deliver services to enrollees.	**NE** **HW**	150 67	141 65	33 33	28 114	9 32	361 311	4.09 3.07	High extent High extent
9.	Existence of poor supervision of health personnel by higher authorities	**NE** **HW**	141 61	151 58	31 40	20 117	18 35	361 311	4.04 2.98	High extent Low extent
10.	On the whole, Existence of enrollees' dissatisfaction with the quality of services rendered by health personnel in the health facility.	**NE** **HW**	142 58	162 69	25 45	21 104	11 35	361 311	4.11 3.04	High extent High extent
	Grand mean = $\frac{NHIS\ enrollees\ (NE)}{Health\ workers\ (HW)} = \frac{4.23}{3.25} = \frac{high\ extent}{High\ extent}$									

Source: Field Survey, 2018

Table 3 above shows that the mean score of almost all the items for the two categories of respondents were greater than 3.0 (which is the cut off mean point in the 5 point Likert scale), except for the mean response of items **one** and **nine** of the Health workers which were 1.93 and 2.98 respectively.

The result also showed that the grand mean rating of NHIS enrollees was higher (with 4.23) than the grand mean rating of the health workers (with 3.25). Since the grand mean of both categories (i.e., 4.23 and 3.25) are greater than 3, the results imply that the shortage of health personnel affects **to a high extent** the effective implementation of NHIS.

Similarly, since the grand mean of enrollees *(mean = 4.23)* is more than that of health workers *(mean = 3.25),* it can be concluded that the mean response on the problem of shortage of health personnel as it affects the effective implementation of NHIS differs between the health workers and NHIS enrollees. Put differently, the NHIS enrollees perceive the problem of shortage of health personnel affecting the effective implementation of the NHIS **more** than the health workers themselves perceive the problem. This is not surprising because the enrollees are at the receiving end of the problem as the workers are the ones who offer the services to the enrollees.

In specific term, item one on table 3 above (which is concerned with the 'inadequacy of health personnel compared to enrollees') has the highest mean score of 4.43 based on the analysis of the opinion of NHIS enrollees within the health facilities in the FCT. This implies that the problem **exists to a high extent** based on the views of enrollees. However, the opinion of the health workers with a mean score of 1.93 indicates that the problem **exists to a very low extent.** Consequently, based on the opinion of the enrollees, it can be deduced that there is evidence of inadequacy of health personnel compared to NHIS enrollees in the FCT.

Item two on table 3 above shows that the existence of inadequacy of health personnel affects the effectiveness of service delivery **to a high extent,** as demonstrated by the mean scores of both the NHIS enrollees (4.38) and that of health workers (3.87). Furthermore, for item three, there is evidence also that the pressure occasioned by shortage of health personnel creates unfriendly attitude on the part of the health workers towards NHIS enrollees. This is reflected in the mean score of both the NHIS enrollees (4.39) and that of health workers (3.79). Evidence also exists across the health facilities in the FCT that preferential treatment is given to non-NHIS enrollees in relation to NHIS enrollees because of out-of-pocket payment that is associated with non-NHIS enrollees. This is revealed by the mean scores of 4.27 and 3.74 on item four for NHIS enrollees and health workers respectively.

Furthermore, table 3 reveals that lack of professional commitment among available health personnel increases poor service delivery to NHIS enrollees **to a high extent**. This is demonstrated by the mean score of 4.22 and 3.35 under item five for NHIS enrollees and health workers respectively. Item six reveals that to a high extent work pressure on health personnel, increases the NHIS enrollees' waiting time to receive service. This is demonstrated by the mean score of both NHIS enrollees (4.25) and health workers (3.25) respectively. Item seven on the table shows that as a result of the inadequacy of medical doctors in particular, non-doctors and nurses often times attend to the health needs of enrollees. The mean score of 4.14 and 3.48 for NHIS enrollees and health workers respectively support the presence of this problem **to a high extent.**

Again, the data from item eight revealed that **to a high extent**, many inexperienced (but qualified) health personnel deliver services to enrollees across the health facilities in the FCT. This is supported by the mean scores of 4.09 and 3.07 for NHIS enrollees and health workers respectively. Furthermore, there is difference of opinion on item nine. On the one hand, the opinion of NHIS enrollees reveals that **to a high extent**, there exists poor supervision of health personnel by higher authorities, as demonstrated by a mean score of 4.04. However, on the other hand, the opinion of the health workers (with a mean score of 2.98) contradicts that of the NHIS enrollees which says that the problem exists **to a low extent**. On the whole, the mean scores of NHIS enrollees and health workers on item ten (which are 4.11 and 3.04 respectively) show that **to a high extent,** there is the existence of dissatisfaction among the NHIS enrollees with respect to the quality of services rendered by health personnel in the health facilities in FCT.

Test of Hypothesis

The study was guided by the following hypothesis:

H_0: The views of NHIS enrollees and health workers do not differ significantly regarding the shortage of health personnel as a barrier to effective implementation of NHIS in FCT

H_1: The views of NHIS enrollees and health workers differ significantly regarding the shortage of health personnel as a barrier to effective implementation of NHIS in FCT

In order to test the hypothesis, the mean response from the NHIS enrollees and health workers in FCT were subjected to an independent two-sample t-test analysis as presented in table 4 below.

Table 4: T- test result on shortage of health personnel as a barrier to effective implementation of NHIS between NHIS enrollees and health workers in FCT

Categories	Total	Mean	Std. deviation	T- test Result	$t_{critical}$	D.F.	P – Value	Confidence Interval	
NHIS enrollees	361	4.23	0.707	-15.86	-1.96	670	0.00	-1.105	-0.862
Health workers	311	3.25	0.897						

Interpretation of Results

The test shows that health workers have statistically significant lower mean response on shortage of health personnel as a barrier to effective implementation of NHIS (3.25± 0.897) compared to NHIS enrollees (4.23± 0.707), with mean difference = 0.98, $t_{(670)}$ = -15.86 and p = 0.000. Given this result therefore, the null hypothesis is rejected and the alternative hypothesis is accepted. This implies that the views of NHIS enrollees and health workers differ significantly regarding the shortage of health personnel as a barrier to effective implementation of the NHIS in FCT. In other words, this conclusion was reached because the calculated t – test of -15.8 is less than the t-critical of -1.96 and the p – value of 0.00 is also less than the 0.05 level of significance at the 670 degree of freedom (d.f.).

Discussion

The result of the test of hypothesis reveals significant difference in the opinion of NHIS enrollees and health workers across the healthcare facilities investigated in the FCT. Although the opinion of NHIS enrollees and health workers differ on the **enormity of the problem** as revealed by the inferential statistical analysis, the descriptive analysis however indicates that their grand mean scores (NHIS enrollees = 4.23, health workers = 3.25) are all above the 3.0 mean cut-off or decision rule which signifies that the problem exists to a high extent. This therefore implies that both categories of respondents are of the opinion that the problem of shortage of health personnel affects the effective implementation of NHIS in FCT to a high extent. Also, since the grand mean score of NHIS enrollees (4.23) is higher than that of health workers (3.25), it implies that the enrollees perceive the enormity of the problem as higher than perception by the health workers. This may not be surprising, considering the fact that the enrollees are at the receiving end of the services provided by the health workers.

The major finding of this study confirms the revelation by Agba, Ushie and Osuchukwu (2010) that there is a gross inadequacy of personnel in the management of NHIS. Although their study was limited in scope, as it focused on one state of the federation, its finding nevertheless reflects the reality on the ground regarding personnel issues in the management of the NHIS. Again, the finding by our study corroborates that by WHO (2007) which it identified gross shortage of personnel as one of the serious problems bedeviling the Nigerian health sector.

Some other key findings of our study reveal much more the extent to which, many health personnel-related issues (other than the problem of inadequacy of personnel) affect the effective implementation of NHIS especially with respect to provision of services to enrollees in the FCT. These some other key findings include health personnel's' unfriendly attitude towards enrollees; and increased waiting time of enrollees to receive services which might have

been caused by work pressure occasioned by shortage of health personnel. This finding confirms what Felix and Uno, (2016) revealed that enrollees could stay for about two days without accessing a doctor owing to the crowd and pressure on available medical personnel. As a result of the shortage of health personnel, many inexperienced (but qualified) health personnel deliver services to enrollees.

One other key personnel-related problem revealed by our study is the existence of lack of professional commitment among health personnel which increases poor service delivery to NHIS enrollees. This finding confirms that of Jegede (2014) that poor attitude and lack of professional commitment of health workers is a major problem in Nigerian health care delivery system. And related to this is that there is preferential treatment given to non-NHIS enrollees because of out-of-pocket payments. This finding further buttresses the fact that enrollees are not happy with the kind of treatment meted out to them whereby the non-NHIS patients are attended to swiftly (because of their out-of-pocket payments), while the NHIS enrollees are kept waiting for a long time before being attended to. This finding again confirms the revelation by Felix and Uno (2016) on the existence of delays experienced by enrollees before receiving service.

On the whole, the study established that there is the existence of enrollees' dissatisfaction with the quality of services rendered by health personnel across the various health facilities investigated in FCT. This state of affairs corroborates the finding by Ele, Ogbonna, Ochei and Odili (2017) on the poor attitude of health personnel towards patients (enrollees) which in turn leads to dissatisfaction of enrollees. In actual fact, all these personnel-related problems discussed above are generated by the pressure caused by inadequacy of personnel which ultimately affects negatively the implementation of the NHIS in the FCT.

Conclusion and Recommendations

This study has demonstrated that one of the major problems militating against the effective implementation of the NHIS is inadequacy of health personnel in the provision of services to enrollees. Arising from this major problem are other key personnel-related problems such as health personnel's' unfriendly attitude towards enrollees, and increased waiting time of enrollees to receive services. Some others include (a) the existence of lack of professional commitment among health personnel which increases poor service delivery to NHIS enrollees, (b) the existence of preferential treatment given to non-NHIS enrollees because of out-of-pocket payments, and lastly (c) the existence of enrollees' dissatisfaction with the quality of services rendered by health personnel across the various health facilities investigated in FCT. Based on these major findings, this study recommends as follows:

The first major recommendation is *the recruitment of Healthcare Personnel*. There exists the urgent need for the recruitment of more qualified health workers across the health facilities in the FCT. This will reduce both the work pressure on the health workers and the number of hours which enrollees and other healthcare seekers spend in the facilities waiting to be attended to. This can be achieved through a declaration of a state of emergency in the health sector particularly on the welfare of healthcare workers to reduce the incidence of brain drain. Such a declaration would make it possible to embark on a widespread recruitment of qualified personnel based on meritocratic considerations.

The second important recommendation is *the training of Healthcare workers*. There is need for periodic training and retraining of health workers. The curriculum of such training should be designed to capture both psychological and attitudinal training in order to inculcate the values of good work ethic and professionalism into them. This will help to enable the personnel exhibit friendly and courteous attitude as well as behavior towards the enrollees and other health care seekers. It is believed that friendly attitude towards a patient will help to improve their psychological wellbeing and go a long way in dousing the anxiety and tension caused by illness.

The third recommendation is *the timely and adequate remuneration of health personnel*. In addition, salaries and other incentives due to health workers should always be paid timely. This will go a long way in reducing shortage of health workers occasioned by the problem of brain drain whereby health professionals go abroad to seek greener

pastures. Also, adequate and constant supervision of the activities of health workers by their superiors should be encouraged by the management in health facilities.

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