

## Clients' experience of the National Health Insurance Scheme (NHIS) at the University of Abuja Teaching Hospital (UATH), Gwagwalada, Abuja

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### Abstract

*Introduction: NHIS is designed to provide easy access to healthcare for all Nigerians. It was rolled out in 2006. The quality of care expected, achievement of the goals and sustainability need to be evaluated. This survey served as a measure to ascertain the expected satisfaction. Materials and Methods: A cross-sectional study of 300 respondents randomly selected from NHIS clients from 14th February – 30th March 2018 with a self-administered modified questionnaire, which assessed satisfaction domains of the client. Associations between dependent and independent variables were subjected to Chi square test and Pearson's Product-Moment Correlation Coefficient (PPMC). Results: Most respondents were females 64.7 % (194), age range of 38 – 47 years had the highest percentage frequency distribution (33.7%). Most respondent marital status was married 244 (81.3%). They were predominantly civil servants (42.0%). The educational status shows 188 (62.7%) tertiary education. Most respondents felt waiting time was too long 39.7% (119) with health information; and 38.0% (114) with code generation unit. 169 (56.3%) respondents said that they do not get an explanation for the non-availability of the prescribed services. 33.3% respondents pay for drugs out of pockets and 37.0% (111), pay for laboratory services. Findings: NHIS is on-going with many enrollees and the aforementioned units need improvement. Conclusion: Since  $\chi^2_{cal}$  (138.03) is greater than  $\chi^2_{tab}$  (7.81) at the 0.05 significant level, it can be concluded that both the observed and expected distributions differ significantly. That is, there is a significant difference in the level of satisfaction of individuals under the NHIS.*

**Keywords:** Health insurance, clients experience, clinic.

### Introduction

The quality assurance of health speaks to the UNICEF sustainable development goals (SDG) 3 of the 17 goals which seek to ensure healthy lives and promote well-being for all at all ages. Pre survey question is to be answered on the SDGs 3 seek to know one key instrument in solving the developed challenges of the century. The Sustainable Development Goals (SDGs) (or Global Goals for Sustainable Development) are a collection of 17 global goals set by the United Nations Development Programme. The formal name for the SDGs is: "Transforming our World: the 2030 Agenda for Sustainable Development." That has been shortened to "2030 Agenda" The goals are broad and interdependent, yet each has a separate list of targets to achieve. Achieving all 169 targets would signal accomplishing all 17 goals. The SDGs cover social and economic development issues including poverty, hunger, health, education, global warming, gender equality, water, sanitation, energy, urbanization, environment and social justice. <sup>[2]</sup>

Ban Ki-moon, the United Nations Secretary-General from 2007 to 2016, and remark to the press at COP22". UN. 15 November 2016. Retrieved 20 March 2017 that: "We don't have plan B because there is no planet B" This thought has guided the development of the Sustainable Development Goals (SDGs). Client's experience surveys serve as important measures of health service performance and a key indicator to the quality of health services rendered by all the health care workers, the clients passed through during their visit to the hospital. The total and unbiased package of access to care, accuracy from one point of service to the other, adequate information received and timeliness of care

rendered to clients from the team of health care workers determine the quality of care received which informs the clients' experience, which could be desirable or undesirable.

This survey is timely for improvement and will suffice for all the health care workers in all the point of service. Therefore, the system and the structural should be contextualized in actualization of the goal for the scheme. There is no survey done on NHIS clients' experience since scheme got her approval at the University of Abuja Teaching Hospital, Gwagwalada Abuja.

## Material and method

This is a descriptive cross-sectional study among NHIS clients attending both General Out Patient and Ante-Natal Clinics at the University of Abuja Teaching Hospital, Gwagwalada Abuja FCT Nigeria.  $\geq 250$  patients are seen in the clinic daily from Monday – Friday and  $\geq 120$  clients are seen on Saturdays - Sundays.

The clinic is under the Family Medicine Department with *Doctors (22) i.e. Doctor Ratio to patients is 1:11. 9 consultants, 9 Senior Registrars, 4 Registrars, Nurses (12) i.e. Nurse ratio to patients is 1:20. 1 Assistant Director of Nursing, 6 Chief Nursing Officer, 2 Assistant Chief Nursing Officer, 2 Principal Nursing Officer, 1 Nursing Officer 1, and a Chief Health Extension Worker. There are, Pharmacist (4) i.e. Pharmacist ratio to patients is 1:62 - 1 Chief Pharmacist, 1 Principal Pharmacist, 1 Senior Pharmacist and 1 Corp member. Also, Health Information Officers/Technicians (17) - 1 Chief Health Information Officer, 1 Assistant Chief Health Information Officer, 2 Principal Health Information Officers, 1 Higher Health Record Officer, 12 Information Health Technician and other supportive staff for the day to day activities of the clinic.*

The clinic is being supervised by a Family Physician who is a Consultant and a Head of Department. The SERVICOM also serve as “THE WATCH DOG” of the clinic. The GOPC/NHIS is the health care service delivery entry point of the University of Abuja Teaching Hospital, Abuja.

The General Out-Patient Clinic (GOPC) is integrated with National Health Insurance Scheme (NHIS) and is in the same complex. The complex is a one-stop-shop consisting of the following: Side Laboratory, Pharmacy (NHIS and OPD), Pay-point, and HMO Desk Officers for Code Authorizations, Health Information Unit, Research Rooms, Waiting Hall, 18 Consulting Rooms, Observation/Procedure Rooms, Seminar room and NHIS Health Information Management Unit and a semi-kitchenette.

Health care delivery services are from 8:00am -8:00pm daily. The clients had holistic care, equal access, opportunity and treatment by the Health Care Team. Clients are also monitored and observed at the observation/procedure room for 4hrs – 6hrs and discharged home by the admitting Doctor. Wound dressings are done under aseptic technique and prescribed injections are administered for out-patient during the shift.

The Federal Inland Revenue staffs, University of Abuja Teaching Hospital staff clinic and their relatives under both NHIS are also adequately covered by the care team.

To test the questionnaire, initial 50 clients were recruited and after a week, 250 clients were added to make up for 300 clients from 14<sup>th</sup> February – 30<sup>th</sup> March, 2018 (6 weeks). The systematic random sampling method was used to select every fifth patient who attended the clinic after the first had been selected that is ratio, 1:5. Clients from 18 years and above on NHIS from 1 year and above were recruited, with exclusion of those who were not willing to participate in the study.

Ethical approval was obtained from the University of Abuja Teaching Hospital Research Ethical Committee. The questionnaire was originally in English language which was given to respondents at the waiting area for completion and had interpreter for 6 respondents who needed interpretation to other local language by the Nurses. Written informed consent was obtained and the study protocol explained.

The questionnaire on their experience items were scored as follows: 1 = Very dissatisfied, 2 = Dissatisfied, 3 = fairly satisfied, 4 = Satisfied, 5 = Very satisfied. Ratings of 1 and 2 were considered dissatisfied while ratings of 3, 4 and 5 were considered satisfied. The primary outcome measures were satisfaction and dissatisfaction. The respondents experience measured the period they have been on the scheme, and a table was designed on how you were treated by the following health care providers

by the Doctors, Nurses, Pharmacists, Lab. Scientist, Radiologist, Porters, Record staff, Code generation staff and was asked to tick each column as excellent, good, fair, and bad

Data were entered using Epi Info Version 7.1.1.14 (CDC, Atlanta GA, USA, 2012). Categorical variables were described in percentages whereas quantitative variables were described using proportions and measures of central tendencies and dispersion. Chi-square and correlation coefficient tests were used to determine the duration the respondents have been on the scheme and the significant difference in the number of hours spent by patients per visit in the hospital.

Using statistical hypothesis to calculate the duration the respondents have been on the scheme and the significant difference in the number of hours spent by patients per visit in the hospital.

$$\text{The Chi-square formula: } \chi^2 = \frac{(o_1 - e_1)^2}{e_1} + \frac{(o_2 - e_2)^2}{e_2} + \frac{(o_3 - e_3)^2}{e_3} + \frac{(o_4 - e_4)^2}{e_4}$$

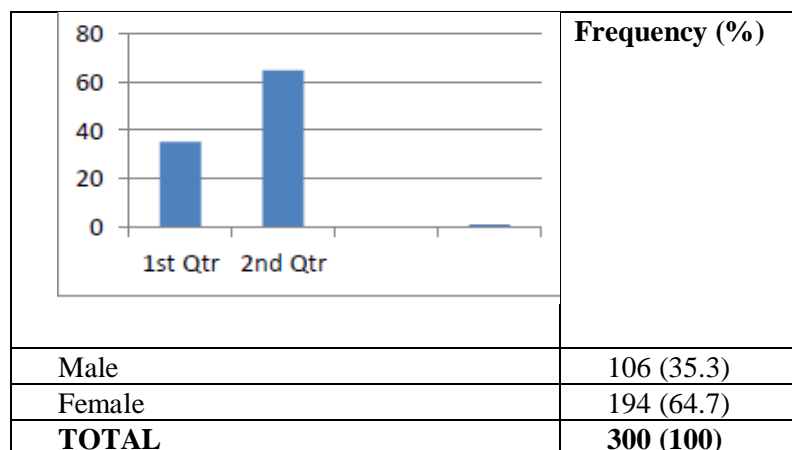
The number of classes or categories,  $k = 4$ ; the degrees of freedom,  $v = k - 1 = 4 - 1 = 3$ . Therefore, the critical value,  $\chi^2_{0.95}$ , for 3 degrees of freedom is 7.81.

Using calculation of the correlation coefficient for the significant relationship in the frequencies for out of pocket expenses for drugs and laboratory services by patients in the hospital under the NHIS scheme - The Pearson's Product-Moment Correlation Coefficient (PPMC),  $r = \frac{\sum xy}{\sqrt{(\sum x^2)(\sum y^2)}} = \frac{2623}{\sqrt{(2186)(3206)}} = \frac{2623}{\sqrt{7008316}} = \frac{2623}{2647.3224} = 0.9908$

The PPMC,  $r$ , of 0.9908 means that there is a very strong linear correlation between the frequencies for out of pocket expenses for drugs and the frequencies for out of pocket expenses for laboratory services by patients in the hospital under the NHIS scheme

## Result

**Table 1.** Sex distribution of respondent



**Table 2.** Age distribution

Variable	Frequency (%)
18 years – 27 years	37 (12.3)
28 years – 37 years	89 (29.7)
38 years – 47 years	101 (33.7)
48 years – 57 years	68 (22.7)
58 years and above	5 (1.7)
<b>TOTAL</b>	<b>300 (100)</b>

**Table 3.** Marital status

Variable	Frequency (%)
Married	244 (81.3)
Single	30 (10.0)
Separated	11 (3.7)
Widowed	12 (4.0)

Widower	3 (1.0)
<b>TOTAL</b>	<b>300 (100)</b>

**Table 4.** Tribe of respondents

Variable	Frequency (%)
Yoruba	59 (19.7)
Hausa	46 (15.3)
Igbo	66 (22.0)
Others	129 (43.0)
<b>TOTAL</b>	<b>300 (100)</b>

**Table 5.** Religion

Variable	Frequency (%)
Christianity	165 (55.0)
Islam	125 (41.7)
Others	9 (3.0)
No answer	1 (0.3)
<b>TOTAL</b>	<b>300 (100)</b>

**Table 6.** Profession

Variable	Frequency (%)
Civil servants	126 (42.0)
Public servants	73 (24.3)
Students	63 (21.0)
Others	31 (10.3)
No answer	7 (2.3)
<b>TOTAL</b>	<b>300 (100)</b>

**Table 7.** Educational status

Variable	Frequency (%)
Primary	39 (13.0)
Secondary	59 (19.7)
Tertiary	188 (62.7)
Informal education	8 (2.7)
No answer	6 (2.0)
<b>TOTAL</b>	<b>300 (100)</b>

**Table 8.** How long have you been in the NHIS scheme?

Variable	Frequency (%)
1 – 3 years	68 (22.7)
4 – 6 years	115 (38.3)
7 – 9 years	89 (29.7)
16 years and above	23 (7.7)
No answer	5 (1.7)
<b>TOTAL</b>	<b>300 (100)</b>

**Table 9.** How many hours do you spend on the average in the hospital per visit?

Variable	Frequency (%)
1 – 3 hours	91 (30.3)
4 – 6 hours	138 (46.0)
7 hours & above	59 (19.7)
No answer	12 (4.0)

<b>TOTAL</b>	<b>300 (100)</b>
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**Table 10.** How much time do you spend at the following points on the average per visit?

Variable	Frequency (%)				
	< 30 mins	31mins – 1 hr	> 1 hr	No answer	TOTAL
Doctors	104 (34.7)	84 (28.0)	54 (18.0)	58 (19.3)	<b>300 (100)</b>
Nurses	103 (34.3)	108 (36.0)	51 (17.0)	38 (12.7)	<b>300 (100)</b>
Pharmacists	115 (38.3)	103 (34.3)	42 (14.0)	40 (13.3)	<b>300 (100)</b>
Laboratory scientists	68 (22.7)	106 (35.3)	70 (23.3)	56 (18.7)	<b>300 (100)</b>
Radiologists	54 (18.0)	104 (34.7)	69 (23.0)	73 (24.3)	<b>300 (100)</b>
Porters	94 (31.3)	92 (30.7)	42 (14.0)	72 (24.0)	<b>300 (100)</b>
Record staff	89 (29.7)	119 (39.7)	47 (15.7)	45 (15.0)	<b>300 (100)</b>
Code generation staff	71 (23.7)	103 (34.3)	114 (38.0)	12 (4.0)	<b>300 (100)</b>

**Table 11.** How many times have you been to the hospital in the last one year?

Variable	Frequency (%)
1 – 5 times	142 (47.3)
6 – 10 times	81 (27.0)
More than 10 times	38 (12.7)
No answer	39 (13.0)
<b>TOTAL</b>	<b>300 (100)</b>

**Table 12.** How were you treated by the following health care providers?

Variable	Frequency (%)				
	Excellent	Good	Fair	Bad	No answer
Doctors	102 (34.0)	136 (45.3)	30 (10.0)	0 (0.0)	32 (10.7)
Nurses	65 (21.7)	156 (52.0)	35 (11.7)	26 (8.7)	18 (6.0)
Pharmacists	61 (20.3)	154 (51.3)	45 (15.0)	26 (8.7)	14 (4.7)
Laboratory scientists	51 (17.0)	148 (49.3)	53 (17.7)	46 (15.3)	2 (0.7)
Radiologists	53 (17.7)	144 (48.0)	46 (15.3)	3 (1.0)	54 (18.0)
Porters	50 (16.7)	144 (48.0)	46 (15.3)	7 (2.3)	53 (17.7)
Record staff	53 (17.7)	157 (52.3)	44 (14.7)	8 (2.7)	38 (12.7)
Code generation staff	46 (15.3)	152 (50.7)	41 (13.7)	52 (17.3)	9 (3.0)

**Table 13.** If you were treated badly, did you report?

Variable	Frequency (%)
Yes	60 (20.0)
No	169 (56.3)
No answer	71 (23.7)
<b>TOTAL</b>	<b>300 (100)</b>

**Table 14.** How often do you get the following services

Services	Frequency of availability of services (%)				
	Always	Most times	Sometimes	Not at all	No answer
Drugs	67 (22.3)	118 (39.3)	64 (21.3)	42 (14.0)	9 (3.0)
Laboratory services	85 (28.3)	109 (36.3)	59 (19.7)	7 (2.3)	40 (13.3)

Counseling services	85 (28.3)	158 (52.7)	27 (9.0)	2 (0.7)	28 (9.3)	<b>300 (100)</b>
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**Table 15.** When you don't get the prescribed services, do you get any explanation?

Variable	Frequency (%)
Yes	83 (27.7)
No	169 (56.3)
No answer	48 (16.0)
<b>TOTAL</b>	<b>300 (100)</b>

**Table 16.** Which is the commonest reason(s) for the non-availability of prescribed or needed services?

Services	Reason(s) for non-availability of services (%)				
	Not covered by the scheme	Not available	Personnel not available	No answer	TOTAL
Drugs	48 (16.0)	139 (46.3)	26 (8.7)	87 (29.0)	<b>300 (100)</b>
Laboratory Services	54 (18.0)	110 (36.7)	40 (13.3)	96 (32.0)	<b>300 (100)</b>

**Table 17.** How often do you have to pay for prescribed services from your pocket?

Services	Frequencies for out of pocket expenses (%)					
	Always	Most times	Sometimes	Not at all	No answer	TOTAL
Drugs	55 (18.3)	100 (33.3)	51 (17.0)	38 (12.7)	56 (18.7)	<b>300 (100)</b>
Laboratory services	56 (18.7)	111 (37.0)	45 (15.0)	40 (13.3)	48 (16.0)	<b>300 (100)</b>

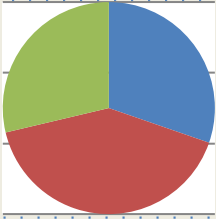
**Table 18.** How will you rate your satisfaction with the scheme

Variables	Frequency (%)	
Very satisfied	86 (28.7)	
Satisfied	151 (50.3)	
Not Satisfied	39 (13.0)	
Unsure	20 (6.7)	
No answer	4 (1.3)	
<b>TOTAL</b>	<b>300 (100)</b>	

**Table 19.** How will you rate your satisfaction with the scheme?

Variable	Frequency (%)	
Strongly agreed	100 (33.3)	
Agreed	155 (51.7)	
Strongly disagreed	14 (4.7)	
Disagreed	10 (3.3)	
Not sure	21 (7.0)	
<b>TOTAL</b>	<b>300 (100)</b>	

**Table 20.** Suggestions on how patients can be treated better so as to improve hospital's services

	<b>Frequency (%)</b>
	Train and retrain personnel of all cadres/code authorization units should be restructured and/or redesigned.
	Get more drugs to the pharmacy.
	Employ more staff.
	<b>TOTAL</b>
	91 (30.3)
	123 (41.0)
	86 (28.7)
	<b>300 (100)</b>

### Statistical testing of hypotheses

**Hypothesis 1 (H<sub>1</sub>):** There will be no significant difference in the number of years individuals have benefitted from the NHIS scheme.

**Table 21.** Contingency table for hypothesis H<sub>1</sub> (obtained from Figure 8)

Event	E <sub>1</sub>	E <sub>2</sub>	E <sub>3</sub>	E <sub>4</sub>
Observed Frequency	68	115	89	23
Expected Frequency	73.8	73.8	73.8	73.8

**E<sub>1</sub> = Frequency for 1 – 3 years; E<sub>2</sub> = Frequency for 4 – 6 years; E<sub>3</sub> = Frequency for 7 – 9 years; E<sub>4</sub> = Frequency for 16 years and above.**

$$\text{Using the Chi-square formula: } \chi^2 = \frac{(o_1 - e_1)^2}{e_1} + \frac{(o_2 - e_2)^2}{e_2} + \frac{(o_3 - e_3)^2}{e_3} + \frac{(o_4 - e_4)^2}{e_4} = \frac{(68 - 73.8)^2}{73.8} + \frac{(115 - 73.8)^2}{73.8} + \frac{(89 - 73.8)^2}{73.8} + \frac{(23 - 73.8)^2}{73.8} = \frac{(-5.8)^2}{73.8} + \frac{(41.2)^2}{73.8} + \frac{(15.2)^2}{73.8} + \frac{(-50.8)^2}{73.8}$$

$$\chi^2 = \frac{33.64 + 1697.44 + 231.04 + 2580.64}{73.8} = \frac{4542.76}{73.8} = 61.56$$

The number of classes or categories,  $k = 4$ ; the degrees of freedom,  $v = k - 1 = 4 - 1 = 3$ . Therefore, the critical value,  $\chi_{0.95}^2$ , for 3 degrees of freedom is 7.81.

**Decision:** Since  $\chi_{cal}^2$  (61.56) is greater than  $\chi_{tab}^2$  (7.81) at the 0.05 significant level, it can be concluded that both the observed and expected distributions differ significantly. That is, there is a significant difference in the number of years individuals have benefitted from the NHIS scheme. This can also be interpreted to mean that significantly different number of individuals had been in the NHIS scheme for different number of years at the University of Abuja Teaching Hospital, UATH, Gwagwalada, Abuja. Therefore, the hypothesis H<sub>1</sub> should be rejected.

**Hypothesis 2 (H<sub>2</sub>):** There will be no significant difference in the number of hours spent by patients per visit in the hospital.

**Figure 22.** Contingency table for hypothesis H<sub>2</sub> (obtained from Figure 9)

Event	E <sub>1</sub>	E <sub>2</sub>	E <sub>3</sub>
Observed Frequency	91	138	59
Expected Frequency	96	96	96

**E<sub>1</sub> = Frequency for 1 – 3 hours; E<sub>2</sub> = Frequency for 4 – 6 hours; E<sub>3</sub> = Frequency for 7 hours and above**

$$\text{Using the Chi-square formula: } \chi^2 = \frac{(o_1 - e_1)^2}{e_1} + \frac{(o_2 - e_2)^2}{e_2} + \frac{(o_3 - e_3)^2}{e_3} = \frac{(91 - 96)^2}{96} + \frac{(138 - 96)^2}{96} + \frac{(59 - 96)^2}{96}$$

$$= \frac{(-5)^2}{96} + \frac{(42)^2}{96} + \frac{(-37)^2}{96}$$

$$X^2 = \frac{25 + 1764 + 1369}{96} = \frac{3158}{96} = 32.90$$

The number of classes or categories,  $k = 3$ ; the degrees of freedom,  $v = k - 1 = 3 - 1 = 2$ . Therefore, the critical value,  $X_{0.95}^2$ , for 2 degrees of freedom is 5.99.

**Decision:** Since  $X_{cal}^2$  (32.90) is greater than  $X_{tab}^2$  (5.99) at the 0.05 significant level, it can be concluded that both the observed and expected distributions differ significantly. That is, there is a significant difference in the number of hours spent by patients per visit in the hospital. This can also be interpreted to mean that significantly different number of patients spent different hours on the average in the hospital per visit. Therefore, hypothesis 2 should be rejected.

**Hypothesis 3 ( $H_3$ ):** There will be no significant relationship in the frequencies for out of pocket expenses for drugs and laboratory services by patients in the hospital under the NHIS scheme.

Figure 23. Calculation of the correlation coefficient,  $r$ , for hypothesis  $H_3$

Frequency	Expenses for drugs (X)	Expenses for laboratory services (Y)	$x = X - \bar{X}$	$y = Y - \bar{Y}$	$xy$	$x^2$	$y^2$
$E_1$	55	56	-6	-7	42	36	49
$E_2$	100	111	39	48	1872	1521	2304
$E_3$	51	45	-10	-18	180	100	324
$E_4$	38	40	-23	-23	529	529	529
	$\sum X = 244$	$\sum Y = 252$			$\sum xy = 2623$	$\sum x^2 = 2186$	$\sum y^2 = 3206$

where  $E_1$  = always;  $E_2$  = most times;  $E_3$  = sometimes;  $E_4$  = not at all;

$$\bar{X} = \frac{\sum X}{N} = \frac{244}{4} = 61; \bar{Y} = \frac{\sum Y}{N} = \frac{252}{4} = 63$$

Using the Pearson's Product-Moment Correlation Coefficient (PPMC),  $r = \frac{\sum xy}{\sqrt{(\sum x^2)(\sum y^2)}} =$

$$\frac{2623}{\sqrt{(2186)(3206)}} = \frac{2623}{\sqrt{7008316}} = \frac{2623}{2647.3224} = 0.9908$$

**Decision:** The PPMC,  $r$ , of 0.9908 means that there is a very strong linear correlation between the frequencies for out of pocket expenses for drugs and the frequencies for out of pocket expenses for laboratory services by patients in the hospital under the NHIS scheme. Therefore, hypothesis 3 should be rejected.

**Hypothesis 4 ( $H_4$ ):** There will be no significant difference in the level of satisfaction of individuals under the NHIS scheme at the University of Abuja Teaching Hospital, Gwagwalada, Abuja.

Figure 24. Contingency table for hypothesis  $H_4$  (obtained from Figure 18)

Event	$E_1$	$E_2$	$E_3$	$E_4$
Observed Frequency	86	151	39	20
Expected Frequency	74	74	74	74

$E_1$  = Frequency for very satisfied;  $E_2$  = Frequency for satisfied;  $E_3$  = Frequency for not satisfied;  $E_4$  = Frequency for unsure.

Using the Chi-square formula:  $X^2 = \frac{(o_1 - e_1)^2}{e_1} + \frac{(o_2 - e_2)^2}{e_2} + \frac{(o_3 - e_3)^2}{e_3} + \frac{(o_4 - e_4)^2}{e_4} = \frac{(86 - 74)^2}{74} +$

$$\frac{(151 - 74)^2}{74} + \frac{(39 - 74)^2}{74} + \frac{(20 - 74)^2}{74} = \frac{(12)^2}{74} + \frac{(77)^2}{74} + \frac{(-35)^2}{74} + \frac{(-54)^2}{74}$$

$$X^2 = \frac{144 + 5929 + 1225 + 2916}{74} = \frac{10214}{74} = 138.03$$

The number of classes or categories,  $k = 4$ ; the degrees of freedom,  $v = k - 1 = 4 - 1 = 3$ . Therefore, the critical value,  $X_{0.95}^2$ , for 3 degrees of freedom is 7.81.



**Decision:** Since  $\chi^2_{cal}$  (138.03) is greater than  $\chi^2_{tab}$  (7.81) at the 0.05 significant level, it can be concluded that both the observed and expected distributions differ significantly. That is, there is a significant difference in the level of satisfaction of individuals under the NHIS scheme at the University of Abuja Teaching Hospital, Gwagwalada Abuja. Therefore, hypothesis 4 should be rejected.

### Summary of findings

(1) NHIS scheme is still on-going at the University of Abuja Teaching Hospital (UATH), Gwagwalada, Abuja, with many beneficiaries.

(2) Significantly different number of individuals had been under the NHIS scheme for different number of years at the University of Abuja Teaching Hospital (UATH), Gwagwalada Abuja.

(3) Significantly different number of patients spent different hours on the average in the hospital per visit

(4) There is a very strong linear correlation between the frequencies of out of pocket expenses for drugs and the frequencies of out of pocket expenses for laboratory services by patients in the hospital under the NHIS scheme.

(5) There is a significant difference in the level of satisfaction of individuals under the NHIS scheme at the University of Abuja Teaching Hospital (UATH), Gwagwalada Abuja.

### Discussion

Many NHIS enrollees critiqued the services rendered by this accredited facility at most points of service, and this survey discovered 100 (33.3%) strongly agreed and 155 (51.7%) agreed that NHIS was beneficial compared to the study done in Aminu Kano Teaching Hospital by Michael GC et. al with the result that, 65.8% of the respondents were satisfied with the services of the clinic. This proportion of respondents was higher than 52% reported in Sokoto Northwest Nigeria by Adamu and Oche among general out-patients but lower than 83% reported earlier by Iliyasu *et al.* Among both out-and-in-patients in Kano also in northwest Nigeria and 87.5% found by Kausar *et al.* In India.

Therefore, the expectations of the clients and their families are high, considering three of the objectives of National Health Insurance Scheme:

(i) Ensuring that every Nigerian has access to good health care and health care delivery services.

(ii) Protecting Nigerians from the financial hardship of huge medical bills whenever they visit our hospitals.

(iii) Maintaining high standard of health care delivery services within the scheme.

However, the expected frequency was a probability factor giving all events equal chance. It was obtained by dividing sum of observed frequencies in each variable by total number of events. Each hypothesis was tested on a null basis, e.g. there will be no significant difference in the level of satisfaction of individuals under the NHIS scheme at University of Abuja Teaching Hospital, Gwagwalada FCT Abuja. After testing the hypothesis statistically, it was concluded that this hypothetical statement should be rejected, i.e. there is a significant difference in level of satisfaction of individual under the National Health Insurance Scheme. Which implies that some people are not yet satisfied with the scheme from their experiences; some areas need improvement in terms of service delivery either. It will be sufficed if the recommendation in Table 20 which provides the suggestions of the respondents on how patients can be treated better so as to improve hospital's services.

### Conclusion

Considering figure 14, 15, 16, 17, and 18, improvements have to be made as some of the respondents under the NHIS scheme still have problems with some services in the hospital. The area of out of pocket expense should be looked at. **Suggestive factors:** Some health care workers that are not really doing what they supposed to do. Hoarding the drugs and services should be looked into. No adequate man-power, there are burn out for the few workers compare to the NHIS populations. The e-health information system will minimize the waiting period. Some of the Health Management Organizations that are over-whelmed with large number of clients should think outside the box on

how to speed up the code generation. The staffs at the code generation unit are not motivated enough and training/re- training will suffice. These are factors for further studies.

Despite the higher proportion of respondents satisfied with the different points of service, out of pocket expenses, waiting time by most respondents is prolonged. Further improvements in overall satisfaction of the clinic would require more investigation into the extent to which some variables in the clinics' structural, interpersonal, and technical components of health care workers has affected overall satisfaction.

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