Research Article

Predictors of Payment Methods for Health Care, Perception and Use of the National Health Insurance Scheme among Pregnant Women in Nigeria

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Abstract

Objective: To determine the predictors of payment methods for health care, perception and use of National health insurance scheme (NHIS) among pregnant women in a low income country.

Methods: An adapted, pretested, semi-structured, interviewer administered questionnaire was used to collect data from 770 pregnant women attending antenatal care (ANC) services in the two selected tertiary health institutions in south-east Nigeria. All consenting pregnant women attending ANC in the facilities irrespective of age and reason for visit were included. Data analysis was by SPSS version 25. Logistic regression model was used to predict the factors influencing perception and use of NHIS.

Statistical significance was accepted when *P*- value was <0.05.

Results: Up to 70.9% of the respondents pay for health care out of their pockets for health services while only 20.0% use the NHIS. Fifty-two percent practice a monthly budget while 67.0% were aware of NHIS. The women had varied perceptions and concerns about NHIS which ranged from inability of the scheme to cover healthcare costs, and reduce hardships from high cost of health care to use of poor quality drugs. Eight (5.2%) of the 154 women that registered with the scheme had never used it.

There were statistically significant association between level of education (x^2= 107.7, p<0.001), respondents' occupation (x^2=49.6, p<0.001), respondents' spouse occupation (x^2=103.3, p<0.001), monthly income (x^2=55.0, p<0.001) as well as age of the respondent (x^2=8.2, p=0.004) and the awareness of NHIS in both facilities. Respondents aged less than 39 years were 0.46 times less likely to use NHIS compared to those 39 years and above (AOR=0.46, p< 0.022, 95%CI = 0.236 –0.900). Use of NHIS was significantly associated with educational level (x^2=19.0, p<0.001) and occupation of spouse (x^2=24.0, p<0.001) in both facilities. There was a significant difference in the method of use of NHIS between the two hospitals (x^2=14.83, p<0.001).

Conclusion: Majority of pregnant women still pay for health care by out-of-pocket method and awareness about the NHIS was fair and a good number of the women were willing to enrol in the scheme if offered the opportunity. Significant predictors for NHIS use were maternal age, occupation of spouse and income.

Keywords: Financial Ruin; Health Care Financing; Health Insurance; Out of Pocket Payment/ Expenditure; Universal Health Coverage

1. Introduction

Universal Health Coverage is defined as providing financial protection from the costs of using health services for all people of a country as well as enabling them to obtain the health services they need, where the services are of sufficient quality and effective [1]. The World Health Organization explicitly stated that universal health coverage not only guarantees every citizen access to acceptable and quality health care, it also provides financial protection to them from "financial ruin", thus cushioning them from the impoverishing effects of ill health and the costs thereof [1]. Financial ruin is the adverse effects on the economic livelihood of individuals and nations as a consequence of paying for health care [2]. Health Insurance shares the risk incurred from health care expenditure, whether direct medical expenses or direct non-medical expenses for both inpatient and outpatients settings [3-5]. All around the world, access to affordable and quality health care service is a right and not a privilege, irrespective of an individual's socioeconomic status [6]. Health systems are therefore concerned with both providing the best available care as well as protecting individuals against the financial burden of illness [7]. Every country is therefore faced with the challenge of balancing the desire for economic efficiency with comprehensive quality medical care [8].

Health care in Nigeria is financed through various sources majority, from pooled and unpooled sources [3]. The pooled sources are obtained from budgetary allocation, direct and indirect taxation, health insurance as well as donor funding, with the unpooled source represented by out-of-pocket payment (OOPs) (in the form of fees made to healthcare provided at the point of service and payment for medical goods) [3]. When individuals, pay out of their pocket, it is usually associated with delayed utilization or even underutilization of health care service, late presentation

to health facilities, patronizing substandard health care facilities, inequitable access to health care or even failure to seek care at all [8]. With the health sector reforms in Nigeria, the National health insurance scheme (NHIS) was born as one of its key outputs. It was established under Act No 35 of 1999 but flagged off in 2005 as a government parastatal totally committed to ensuring universal coverage and access to adequate and affordable healthcare in order to improve the health status of Nigerians viz-a-viz delivery of standard and efficient health care services [6]. The NHIS presently serves 4.0% of an estimated 170 million Nigerians [9]. The NHIS has various programmes designed to cover different segments of the society and range from formal sector and informal sector to vulnerable group social health insurance programs [10]. Presently, all the programmes are functional with the exception of the vulnerable group social health insurance programme [11]. Health care services under NHIS are provided through a three level of services arrangement namely, primary, secondary and tertiary level of services [10]. Like every other form of health insurance, NHIS covers the risk of a person incurring medical expenses spreading the risk over a large number of persons [10]. Nigeria and Ghana adopted the NHIS at the same time with Ghana having uniform benefits across all her beneficiaries and Nigeria having variable packages as seen above [12]. NHIS therefore attempts to provide universal health coverage viz-a-viz providing financial protection to her beneficiaries. Therefore, if out-of-pocket payment for health plays less role in financing health services it becomes easier to access healthcare and time spent before seeking health care is also reduced [13]. It is estimated that 15% of women will develop a potentially life threatening complication during pregnancy or childbirth [14]. The lifetime risk that a woman will die of pregnancy or maternal causes in Nigeria is 1in 22, in sharp contrast to high income countries whose lifetime risk is 1 in 6000 [14]. In the

last WHO study of trends in maternal mortality, it was succinctly noted and stated that Nigeria has made no progress towards achieving the Millennium Development Goal 5A (Reduction of maternal mortality by 75% between 1990 - 2015) [14]. These outrageous maternal indices can be decreased if a pregnant woman receives adequate preconception, antenatal, childbirth and postnatal care [15]. Reductions of these indices are important as it is a well-known fact that the death of a mother has dire consequences on the surviving children, household and community on the whole [15]. However most of the women in Nigeria are indigent due to the economic recession in the country [13]. Health Insurance cover has been identified as a critical factor to improve access to, and the quality of maternal and perinatal care, through protection against unexpected financial setbacks, reduction in monies spent out-of-pocket due to illness, and prevention of loss of employment due to prolonged illness [16]. However, pregnant women or even any other individual will not be able to use NHIS when they know little or nothing about NHIS or even have a wrong perception of it.

Individuals and households that pay for healthcare by out-of-pocket payments face the risk of inadequate access to health care and its grave consequence [8]. There is a positive association between insurance and antenatal care with maternal health insurance playing a significance role in the utilization of maternal, neonatal child health services [16]. Antenatal care is an important component of maternal health care and produces huge potential benefits with positive pregnancy outcomes [17]. Women who use health insurance had better uptake of Antenatal care, booked for Antenatal care on time, had skilled delivery and postnatal care than those who were not insured [16, 17]. Various studies have been done on methods of health financing /payment for health, methods and use of health insurance but few of these studies have been conducted in tertiary health care

institutions in Nigeria. Extensive studies have been done on awareness and perception of NHIS among civil servants and workers in the formal sector but there is dearth of studies on the predictors of payment methods for health care, perception and use of NHIS among pregnant women in a low income country setting. This study is aimed at determining the predictors of payment methods for health care, perception and use of NHIS among pregnant women in a low income country.

2. Materials and Methods

This was a comparative, cross-sectional descriptive study of the methods of payment for health care, perception and use of the National Health Insurance Scheme (NHIS) among pregnant women attending antenatal care in Nnamdi Azikiwe University Teaching Hospital (NAUTH), Nnewi, Nigeria and Chukwuemeka Odumegwu Ojukwu University Teaching Hospital (COOUTH), Awka, Nigeria. All the women attending ANC in the facilities irrespective of age and reason for visit were invited for the study. Those who declined participation during the period of this study were excluded. The sample size was obtained using the using the Cochran formula for cross-sectional study [18] $N=Z^2alphaPQ/d^2$ where: Z=standard normal deviation at 95% confidence interval; P= proportion of those who have good knowledge of NHIS in a tertiary health institution based on a previous study which was 28.7% [19]; Q=1-p and d=0.05. The ultimate was adjusted to allow a non-inferiority sample size of 315 obtained and rounded up to 378 per facility to cater for 20% attrition or non-response. Hence a total of 770 respondents was used for the study. Every consenting ANC attendee was sampled during the period of study. An adapted, pretested, semi-structured, interviewer-administered questionnaire was used for data collection. [7, 8, 20] The questionnaire was administered over a 6-week period. (January to March 2018). To ensure validity, the questionnaire was pretested using 40 women (5% of

sample size) attending antenatal clinic at the study hospitals. Participants were recruited from the list of all those that attended clinic daily. From hospital records, an average of 350 women use ANC services in each of the hospital each month, hence every consenting ANC attendee was sampled during the study. Questionnaire was administered on exit from the clinic after all health care services have been obtained.

Approval for this study was obtained from the Nnamdi Azikiwe University Teaching Hospital Ethics Committee (NAUTHEC). The head of department of Community Medicine and Primary Health Care NAUTH / NAU and COOUTH gave permission for the study. Permission was also obtained from the Heads of Department Obstetrics and Gynaecology and Matrons-In-Charge of Antenatal Care services in both facilities. Participants gave informed consent prior to administering the questionnaire. The aim of the study was explained to the respondents and they were guaranteed of their confidentiality. Data obtained were analyzed using International Business Machine - Statistical Package for Social Sciences (SPSS) version 25 software package. Data was summarized using tables, charts, measure of central tendency and hypothesis was tested using tests of statistical significance e.g. chi square test. Logistic regression model was used to predict the factors that influence the perception and use of NHIS. Odds ratio and confidence interval were used to assess for relationships in the results of the two health facilities studied. Statistical significance was accepted when P- value is <0.05.

3. Results

3.1 Socio-demographic data

A total of 770 consenting pregnant women aged 16 to 45 years participated in this study; 385 from NAUTH and 385 from COOUTH. This therefore gives a response rate of 100%. Mean age of the respondents in

NAUTH was 29.6 ± 5.65 years while that for COOUTH was 28.5 ± 4.87 years. The minimum age in both centres was 16 years. The maximum age in NAUTH was 43 years while that in COOUTH was 45 years. About 95% of all respondents were married with only 3% being single. More than half of the respondents in NAUTH were married to traders. On the other hand in COOUTH 39.2% were married to civil servants with the difference in the occupation of the spouses in both facilities being statistically significant ($x^2 = 485.3$, p = 0.001). Majority (86.9%) of the women in both centres had at least secondary education. The difference in the level of education between the two institutions were seen to be statistically significant ($x^2 = 93.4$, p = 0.001). As seen in table 1, out of pocket payment contributed the highest quota (70.9%) in both facilities. Only 20.0% use the NHIS as mode of payment, with the rest (9.1%) paying with borrowed money. A statistically significant difference was noted in the different payment method used by pregnant women in both facilities. ($x^2 = 51.48$, p < 0.001). See Table 1.

From Table 1, a little over half (52.5%) of all the respondents budget money for health expenditure. It is also worthy of note that 64.7% of the women in NAUTH practice monthly health budget while almost an equivalent proportion (59.7%) in COOUTH did not. The difference in practice of monthly budget in both facilities was found to be statistically significant ($x^2 = 46$, p < 0.001). Some of the perceptions and ideas of

these women ranged from the feeling that NHIS does not cover the cost of health care, is expensive to use of poor quality drugs etc. (Table 2).

The participants' perception of NHIS is shown in table 3. There was a significant difference on the use of NHIS between NAUTH and COOUTH among proportion of women that were registered with the NHIS ($\chi^2 = 11.72$, p<0.001). Pregnant women in COOUTH were 0.53 times more likely to use the NHIS than those in NAUTH (AOR:0.53, p=0.0007, 95%CI=0.3717-0.7671) (Table 4). The Comparison on the method of use of NHIS between NAUTH and COOUTH was shown in Table 5. Binary logistic regression (multivariate analysis) was used to predict socio-demographic factors that influence the usage of NHIS in NAUTH and COOUTH. Respondents aged less than 39 years were 0.46 times less likely to use NHIS compared to those 39 years and above (AOR=0.46, p< 0.022, 95%CI = 0.236 –0.900). Educational level was not found to be a statistically significant factor predicting the use of NHIS. Occupation of the spouse was a statistically significant predictor of as respondents whose spouses were traders were 18.82 times less likely to use the NHIS when compared with the civil servants (AOR:18.82, p =0.0002, 95%CI: 4.0293-87.97). Those whose spouses were civil servants were 0.2308 times more likely to use the NHIS than those of all other occupations AOR: 0.2308, p = 0.00001, 95%CI: 0.1116-0.447 (Table 6).

	NAUTH N (%)	COOUTH N (%)	Total N (%)	Inferential Statistics X^2
Practice monthly health budget				
Yes	249 (64.7)	155 (40.3)	404 (52.5)	$X^2 = 46$, p < 0.005*
No	136 (35.3)	230 (59.7)	366 (47.5)	
Mode of hospital payment				
Out of pocket	265 (68.9)	281 (73.0)	546 (70.9)	
NHIS	58 (15.1)	96 (24.9)	154 (20.0)	

| Borrowed Money | 62 (16.1) | 8 (2.1) | 70 (9.1) | $X^2 = 51.48$, p <0.005* |

*Statistically significant p<0.05

Table 1: Practice of monthly health budget and mode of hospital payment.

	NAUTH	COOUTH	Total	Inferential statistics
Registered under NHIS	n = 385	n = 385	n = 770	
Yes	58 (15.1)	96 (24.9)	154 (20.0)	
No	327 (84.9)	289 (75.1)	616 (80.0)	X^2=11.52, p < 0.001*
How often NHIS is used	n = 58	n = 96	n = 154	
Never use it	6 (10.3)	2 (2.1)	8 (5.2)	
Always use it	18 (31.0)	58 (60.4)	76 (49.4)	
Rarely	6 (10.3)	5 (5.2)	11 (7.1)	
Sometimes	28 (48.4)	31 (32.3)	59 (38.3)	
Willingness to participate in NHIS	n = 327	n = 289	n = 616	
Yes	241 (73.7)	203 (70.2)	444 (72.1)	X^2=0.9116, p= 0.339
No	86 (26.3)	86 (29.8)	172 (27.9)	

*Statistically significant p<0.05

Table 2: The Use of NHIS in the two hospitals.

Variables	NAUTH n = 385 (%)	COOUTH n = 385 (%)	Total n = 770 (%)
NHIS is better than paying out of the pocket			
Yes	186 (37.7)	206 (53.5)	392 (50.9)
No	62 (16.1)	12 (3.1)	74 (9.6)
I don't know	137 (35.6)	167 (43.4)	304 (39.5)
NHIS improves access to health care			
Yes	145 (37.7)	201 (52.2)	346 (44.9)
No	61 (15.8)	5 (1.3)	66 (8.6)
I don't know	179 (46.5)	179 (46.5)	358 (46.5)
NHIS will reduce hardship from high cost of health care			
Yes	208 (54.0)	188 (48.8)	396 (51.4)
No	46 (11.9)	27 (7.0)	73 (9.5)
I don't know	131 (34.0)	170 (44.2)	301 (39.1)
NHIS is a good idea			
Yes	164 (42.6)	213 (55.3)	377 (49)
No	52 (13.5)	4 (1.0)	56 (7.3)

I don't know	169 (43.9)	168 (43.6)	337 (43.8)
Concerns about NHIS			
Is like wishing one's self ill health			
Yes	58 (15.1)	35 (9.1)	93 (12.1)
No	327 (84.9)	350 (90.9)	677 (87.9)
It is expensive			
Yes	92 (23.9)	72 (18.7)	164 (21.2)
No	293 (76.1)	313 (81.3)	606 (78.7)
I have little or no trust in government policies			
Yes	62 (16.1)	29 (7.5)	91 (11.8)
No	323 (83.9)	356 (92.5)	67 (88.2)
Government might not be transparent in handling funds			
Yes	37 (9.6)	36 (9.4)	73 (9.5)
No	348 (90.4)	349 (90.6)	697 (90.5)
Does not cover the cost of health care			
Yes	62 (16.1)	122 (31.7)	184 (23.9)
No	323 (83.9)	263 (68.3)	586 (76.1)
Poor Quality Drugs	89 (23.1)	118 (30.6)	129 (26.8)

Table 3: Perceptions of NHIS among the participants.

Variable	Registered Under NHIS			χ^2	AOR	p
	Yes (%)	**No (%)**	**Total**			
NAUTH	58 (15.1)	327 (84.9)	385			
COUTH	96 (24.9)	289 (75.1)	385	11.72	0.53	0.0007
Total	154 (20)	616 (80)	770			

AOR – Adjusted odds ratio

Table 4: Comparison on use of NHIS between NAUTH and COOUTH.

Method of use of NHIS	NAUTH	COUTH	Total	χ^2	p value
Never	6	2	8		
Always	18	58	76		
Rarely	6	5	11	14.83	<0.001
Sometimes	28	31	59		
Total	58	96	154		

Table 5: Comparison on the method of use of NHIS between NAUTH and COOUTH.

Variables	NAUTH n=58	COOUTH n=96	*P*	AOR	95%CI
Age (years)					
<39	21	53	1		
≥39	37	43	0.022*	1.46	0.236 – 0.900
Occupation					
Student	6	13			
Trader	9	10			
Artisan	4	9	0.360	-	-
Civil servant	24	39			
Health worker	12	11			
Unemployed	3	12			
Others	-	2			
Spouse occupation					
Student	0	0	-	-	-
Trader	14	2	0.0002*	18.82	4.0293 – 87.97
Artisan	5	6	0.2097	2.241	0.6351 –7.9103
Civil servant	29	78	0.00001*	0.238	0.1117 – 0.477
Health worker	8	7	0.534	0.44	0.032 – 5.926
Unemployed	1	1	0.045*	3.0739	1.0229 – 9.237
Others	1	2	0.8117	1.3448	0.1174-15.393
Highest level of education					
None	4	0			-
Primary	3	4	0.0773	3.1569	0.8819 –11.30
Secondary	22	15			
Tertiary	29	77			-
Monthly Income					
No income	7	9	-	1	-
<40,000	35	29	0.366	0.6	0.198 -1.817
≥40000	16	58	0.00001*	4.3750	2.086 – 9.1757

AOR – Adjusted odds ratio, 95%CI – 95% confidence interval   * statistically significant p<0.05

Table 6: Logistic regression on some socio-demographic factors predicting use of NHIS in COOUTH and NAUTH.

4. Discussion

This study was set up to assess and compare payment methods for health care, perception and use of NHIS mong pregnant women attending antenatal care in two tertiary hospitals in Nigeria. Making payments out of pockets can prevent poor households from using maternal health services, hence the need to integrate the use of a health insurance scheme to eliminate the

financial barriers associated with the use of such services [4]. Prior to this study, investigations on equity in the use of health care, quality of care and universal financial protection in different regions had as a primary objective to identify determinants that influence the various methods of payment for health care. Several studies have also been done on awareness, perception of NHIS among civil servants, health personnel and workers in both rural and urban settings. In line with this view, out-of-pocket, National Health Insurance Scheme and borrowed money were the major methods of hospital payment in the two health facilities. Out-of-pocket payment for health care at the point of service accounted for 70.9% of health care payment made in the two health facilities, while NHIS (20%) and borrowing money (9.1%) accoued or others [3, 8]. This is line with the findings of Uzochukwu *et al.,* [3] in 2015 where it was noted that most people pay for health care in Nigeria out of pocket and this predisposes them to financial ruin. Other researchers also recorded similar high percentages [4, 7, 8, 20-23]. The high prevalence reported in this study for out-of-pocket payment was probably due to low level of knowledge of NHIS among the respondents, non-compulsory of the available insurance health scheme to all workers, lack of awareness of the fact that the scheme is no longer for only civil servants but for both traders and artisans.

Out of 770 respondents that participated in this study, 67.3% of the respondents have heard about NHIS. The high prevalence is consistent with the outcome of the study carried out recently by Adewole *et al.,* among 344 market women in Ibadan [24], however in contrast with the findings of the study conducted in 2015 by the same author that recorded a lower prevalence (28.4%) [8]. The high percentage in awareness of NHIS in the two health facilities used in this study might be due to the level of education of the participants and their close associates, as most of them have attended secondary and

tertiary education. Also, television and radio programmes on importance of NHIS may have contributed to the awareness. There was a statistically significant association between level of education, respondent's occupation, spouse occupation, monthly income and age of the respondents and awareness of NHIS in the two health care institutions ($p < 0.05$). This was similar to other studies done in various parts of the country [5, 8, 24-29]. However there was an insignificant association between monthly income, age of the respondents and awareness and non-awareness of NHIS in one of the institutions studied ($p > 0.05$). This is in contrast with what was observed in Orire Oyo, in Nigeria where monthly income was significantly associated with awareness of the NHIS scheme [8].

Three hundred and ninety (50.9%) out of 770 respondents in this study were in the opinion that NHIS was better than out-of-pocket payment for hospital bills even though 52.5% of them still practiced out of pocket payment. This may be due to level of income of the respondents as 89.5% of them still earn less than 41,000 naira monthly. Other speculations might include; inability to differentiate the scheme from other traditional rotational microfinance schemes, misconceptions by some respondents that the scheme is only meant for the rich, delay in processing insurance identity cards after registration, yearly renewal of identity cards, perceived limited benefit package of the NHIS and waiting time at the health facility by the already insured beneficiaries. The result of this study is in harmony with findings of studies conducted by various researchers in the past [4, 5, 8, 24-28]. Less than 50% of the respondents believed that NHIS improves accessibility to healthcare. The low prevalence recorded in this study on whether NHIS enhances healthcare or not, was in contrast with the outcome of the studies conducted by Adewole *et al.,* [8, 24] in 2015 and 2017 respectively. However, 39.5% of the respondents in this

study were sceptical about the scheme. This was inconsistent with the outcome of the study carried in 2012 out by Lawan *et al.,* at Kano, Northern Nigeria that noted a significant proportion being pessimistic about the scheme [25]. According to the findings from the respondents attending antenatal care in the two health facilities studied, majority were of the opinion that NHIS will reduce hardship from high cost of healthcare (51.4%). This was similar with the outcome of the study carried out in Ibadan, Nigeria, where 314 out of the 344 respondents were of the opinion that NHIS would minimize financial hardship [26]. Their opinions were similar because they do not have to pay at point of service. Like reports from several other studies that have been conducted on the subject [3, 4, 23, 25], NHIS was seen as a good idea by 40.9% of the respondents in this study. Also similar opinions were shared by the respondents attending ANC in the two health care institutions on the cost of NHIS, trust in government policies, transparency of the government in handling funds and covering the cost of healthcare as well as poor quality drugs used by the scheme. This might be due to the fact that some of them are enlightened about National Health Insurance Scheme. This is in agreement with the reports of Adewole *et al.* [8, 24].

Up to 15% to 24.9% of the respondents from the two health care institutions are registered under NHIS. The finding of this study recorded an overall low percentage on the utilization of NHIS by the respondents attending ANC at the two health facilities (20%), similar to other studies with equally low proportion of enrolees under the NHIS [4, 7, 26-28]. This might be due to their level of income, low level of knowledge on the aims and objectives of NHIS among the respondents and lack of conviction that NHIS was feasible. However, this finding was in contrast with the report of Adewole *et al.* that recorded a high proportion of enrolees under the

NHIS [24]. Also in this study 72.1% of 616 respondents who were not registered under scheme were willing to enrol under NHIS. The reason may not be far-fetched as they must have seen the importance and the benefits of the scheme. This was in harmony with the result of the study carried out in South-Eastern Nigeria by Okaro *et al.* [28]. Prior to this study, findings from other studies have shown that factors like unstable income, conflicts with religious beliefs, poor financial status, lack of transparency on management of the funds in the scheme, lack of trust on government policies, lack of awareness of the scheme level of education and inadequate knowledge about the scheme (misconceptions) have influenced respondents' awareness, perception and use of NHIS [3-5, 7-9, 16, 17, 21, 23, 25]. Other factors mentioned include high premium payment for registration, delay in processing insurance identity cards after registration, yearly renewal of identity cards, perceived limited benefit package of the NHIS and unreliable nature of the insurance agents [26, 29]. In the present study, there was a statistically significant association between level of education, respondent's occupation, spouse occupation, monthly income and age of the respondents and awareness of NHIS in the two health care institutions ($p < 0.05$). This is in agreement with the reports from other studies within and outside Nigeria [17, 21, 23, 24]. However, applying multivariate analysis using binary logistic regression, monthly income and occupation of spouse, were the two factors that influenced the use of NHIS by respondents from the two health facilities in this study. This might be due to the fact that majority of the respondents who were registered under the scheme were either civil servants or married to one.

On the usage of NHIS between the two heath facilities, there was a significant difference on the use of NHIS between the two health care institutions among women

that are registered with the NHIS. Women attending ANC at one health care institution were 0.53 times more likely to use NHIS compared to women attending the other. This may be as result of the level of income, education of the participants and geographical location of the hospital being an urban centre. One limitation of the study was that the questionnaire was interviewer-administered and this may have influenced the response of the participant as they may not have given true responses. However, the contents of questionnaire were properly explained to the respondents before issuing them.

5. Conclusion

Majority of pregnant women still pay for health care by out-of-pocket method. Awareness about the NHIS in this study was fair and from the responses obtained, the women were willing to enrol in the scheme if offered the opportunity. Therefore, there appears to be no changing trend for improvement. Coverage of the scheme is still poor among non-civil servants and non government workers as seen by the number utilising the scheme. However, inability of the scheme to cover all the costs of health care, poor quality drugs used by the scheme, lack of trust in government social policies, perceived mismanagement of funds and level of income were some of the factors that might impede the utilization of the NHIS in the two selected health facilities. This study has therefore contributed to existing body of evidence and will aid the improvement of the existing scheme or the formulation and implementation of a highly effective and efficient scheme that can be used by clients seeking quality health care.

Conflicts of Interest

The authors declare no conflicts of interest and funding.

Data Availability

The data used to support the findings of this study are available from the corresponding author upon request.

Author's contribution

AEO, ASN, IKN, and ANE contributed to the study conceptualization and methodology; AEO, CCN, CCA, and CAE conducted the clinic study, ensured completion of the participants data and extracted the required data; AEO and ASN analysed the data and drafted the original manuscript; CCN and GUE worked with AEO on formal analysis; ASN, CCN, CCA, CAE and GUE contributed to the project administration, writing (review and editing), data visualization, and supervision. All authors have seen and approved their contributions and the final version of the manuscript.

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