



DETERMINANTS IN NATIONAL HEALTH INSURANCE SCHEME AWARENESS AND PARTICIPATION IN KADUNA STATE

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ABSTRACT

National Health Insurance Scheme (NHIS) is a social basic service offered by the Federal Government of Nigeria to its citizen, in order to achieve universal healthcare (UHC) coverage but its progress seems to be facilitated or hindered by some factors. This paper seeks to access the determinants of NHIS participation of Kaduna State. Adopt multiple stages sampling in the collection of data from 400 respondents. Frequencies, percentages and tables were used to present results obtained but applied Pearson product moment correlation coefficient to test for significant relationship at 0.01 significant levels. The result shows that majority (80.1%) of NHIS participants in the study are within the productive and reproductive age group, married with children, have a minimum household size of five but enrolled 3-4 family members (28.8%), educated, 45% are income earners that obtain health services from mainly private HCFs with distance that is less than 5km, and awareness in NHIS had positive relationship with age, sex, number of children and household size. Positive relationship existed between age, household size, education, monthly income earned and immediate participation in NHIS while duration in NHIS participation had positive relationship with income and immediate participation in NHIS but employment status had a negative relationship. The paper recommends a comprehensive public awareness on NHIS participation that surpasses the office environment and encourages informal sectors to participate in NHIS is needful and avoids delay in participation after been informed about the scheme, for a successful UHC coverage.

Keywords: Demographic, Socio-economic, Participation, NHIS

INTRODUCTION

National Health Insurance Scheme (NHIS) was instituted in Nigeria on 16th June 2005 by the Federal Government of Nigeria; it was designed to overcome household/individual out-of-pocket expenses on healthcare services acquired and to address the glaring problem of inadequate healthcare provision (NHIS, 2012). Its principle involves prepayment of healthcare services obtained by mobilising resources for health, pool risk and provide quality healthcare system to all Nigerians (Ayanleye, 2013; Etobe and Utibe, 2013).

This entails a spread-out cost incurred in obtaining quality healthcare from NHIS overtime. Its funding for formal sector comprises 10% contribution from enrollee's employer and 5% contribution from enrollees' basic salary while informal sector pays ten thousand six hundred and fifty naira per individual while the cost for a maximum household size of six is fifty-seven thousand nine hundred and ninety naira (₦10,650/-₦57,990) annually (NHIS, 2012; Onyedibe et al, 2012; Ayanleye, 2013; Ibrahim, 2021).

Participation in NHIS since its inception has been centralize and has led to 3% of Nigerian's population constituting its insurance coverage but effort has been made by its stakeholders to increase NHIS participation, and this led to decentralization of the scheme and reforms. Its decentralization policy enables state civil service workers and informal organization such as trades, youth corps, farmers and others to participate in the scheme. This was instituted in the year 2014 and Kaduna State adopted it as a Contributory Health Management Authority in February 2018 but commenced in June 2020 and has recorded a total population coverage of 521,096 and 3.6million percentage coverage for the Nation (Shobiye et al, 2021; Ibrahim, 2021; Justin, 2023). The scheme was restructured and renamed by the former President Muhammad Buhari who reformed the NHIS act and changed its name to National Health Insurance Authority

(NHIA) on the 17th May 2022, (NTA news broadcast, May, 2022).

According to Remler and Giled (2003) that participation in NHIS among eligible citizens is based on the benefit attached to the program since its package gives leverage to the cost in treatment of a particular ailment. Although, these benefit-package are in sizes and varies due to the effects of some variables and was seen to be the cause of low participation in health insurance in United Kingdom. In most countries such as America, percentage coverage in social basic need such as food stamps and unemployment insurance are higher while health insurance has low percentage coverage despite its connectivity to individual's health. This shows that decrease in percentage coverage is as a result of some factors which could be endogenous and exogenous. Hence seeks the role of health geography in explaining individual/household member's health behavior over space (Thomas et al, 2005).

This has been aided by spatial behavioral theory which illustrates factors that influence individual's behavior towards participation in NHIS. It categorises the variables into predisposing, enabling and need for care factors. Predisposing factors include family size and composition, social class structure, distance, cultural, mobility and health belief status. Mobility implies individual's behavior towards healthcare utilization in terms of location of their homes, work place or business centers. Spatial behavior measures and understands that social and cultural variables affects participation and utilization of healthcare services and was also illustrated by Chapman (1978) as social distance. According to Chapman (1978) it shows that participation in NHIS is based on values and attitudes held by individual/household towards NHIS that occurs through social interaction with a base on socio-economic status, ethnic spatial separation that is based on traditional loyalties and cultural affiliation.

Studies on NHIS participation include Shobiye et al. (2021); examine determinant and perception of health insurance participation among healthcare providers with a focus on markets and providers response to the scheme. Observed that providers motivation in NHIS participating is based on patient percentage coverage and revenue generated, further include that urban areas with large population size are characterize by higher number of non-enrollee and fewer accredited NHIS HCF. Others are Ying et al. (2007) examined the relationship between income and NHIS participation, concluded that income has a fundamental effect on NHIS participation. Guis (2010) and Dixon et al. (2011) found that education and employment have positive correlation with NHIS participation. On the other hand, study by Jehu-Appiala et al. (2011) examined the relationship among predisposing,

enabling, social and need factors in Ghana. The study differs from that of the paper in terms of location, and the aspect of perception on factors influencing NHIS participation. Ipinimo et al. (2022) found inequality in accessing healthcare delivery at accredited NHIS HCFs in both rural and urban areas in Nigeria. Hence, this paper tends to study the determining factors of NHIS awareness and participation in Kaduna State.

MATERIAL AND METHODS

The study area consists of Zaria, Igabi and Zango Katag Local Government Area (LGA) of Kaduna State (see Figure 1). These LGAs have thirteen (13), twelve (12) and eleven (11) geopolitical wards and its population figure respectively and are presented in Table 1.

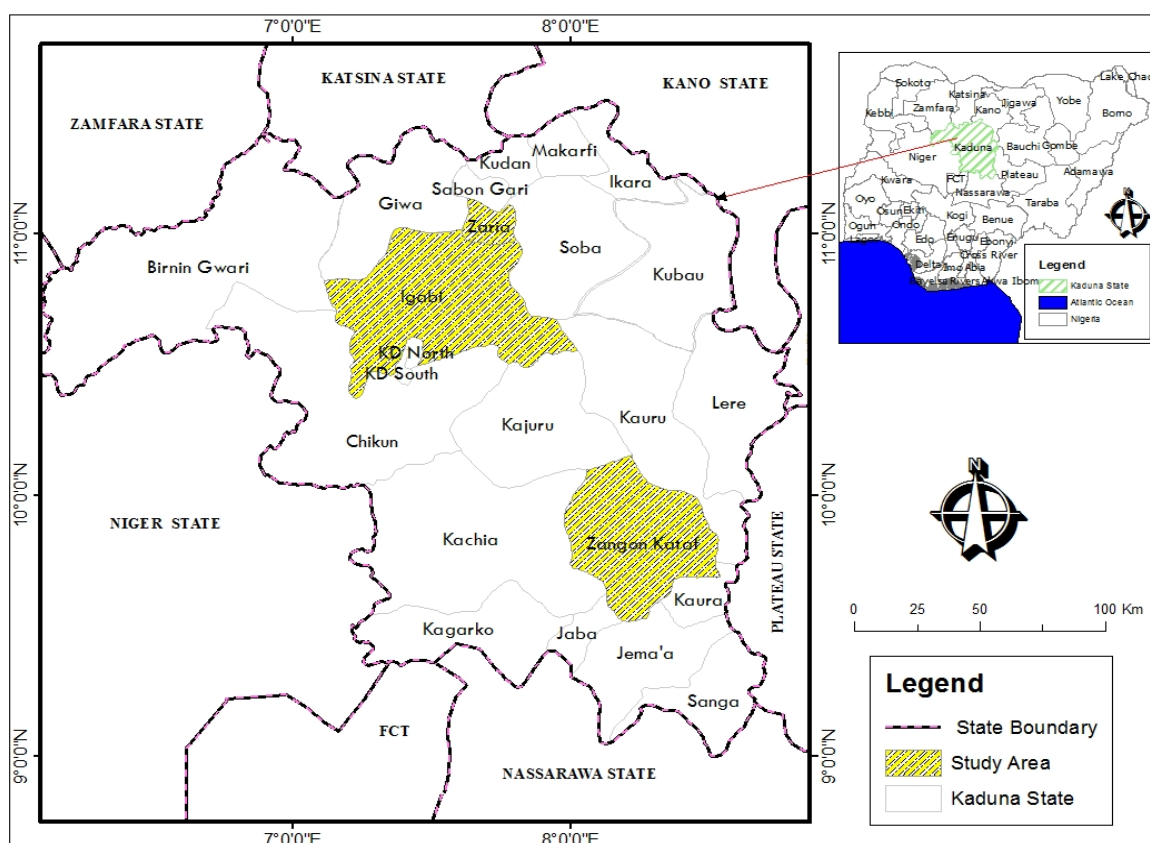


Figure 1: LGAs of the study.

Source: Modified from the Administrative Map of Kaduna State

The study area has a tropical continental climate type with two distinct seasons of dry and rainy season. According to World Health Organisation (WHO) (2008) some low cost diseases occur due to seasonal variation in the climatic condition of a place. The study area is an area vulnerable to the occurrence of low cost diseases on its residents, and they are areas that are developed with several infrastructural developments whose human resources need to be cared for.

Data were obtained via primary and secondary sources; the primary source entails structured questionnaire administration to 400 respondents who were drawn through multistage sampling techniques while the secondary source are printed materials from online, textbooks, journals, thesis/dissertation and electronic media to prop up information on its literature review. Acquisition of the primary data was first done by adopting purposive sampling technique in selecting the LGAs for study, and it was based on its high population figure of the

LGA, drawn from the three senatorial districts in Kaduna State as recorded by 2006 population census (National Population Commission [NPC], 2006). Systematic sampling technique was used in selecting respondents in the neighbourhoods and it was based on the settlements lay out or planned. The respondents were picked from every fifth house on every street but a random selection was done in administering of questionnaire to the households, and it was based on readiness and availability of individual in the household to answer the questionnaire.

In arriving at target population size of 400, projected population formula was used (NPC, 2009):

$$P_0 = P_1(1+r)^n \quad (1)$$

P_0 = Projected population for the year 2022, P_1 = Initial population figure (see Table 1), r = Growth rate / 3.07% (NPC), n = Number of years projected /16years (2006 to 2022)

This was followed by the formula for estimated household (NPC, 2012)^b

$$\frac{\text{Number of households for three LGAs} = \text{Total Population at the selected LGA under study}}{\text{Household size}} \quad (2)$$

Sample size of households for the survey was further determined by employing the mathematical formula of Miller and Brewer (2003) which is

$$n = N/1+N(e)^2 \quad (3)$$

Where N = Total number of estimated households for the three LGAs under study for the year 2022, e = Level of significant, Constant=1, Exponent=2, n = Sample size for the study area, N = 375,300, e = 0.05 or 5%
 $n = 375,300 / 1 + 375,300 (0.05)^2 = n = 400$

The sample size is 400 but was further splitter into units. To determine the proportional unit of households at the LGA to be administered to it was determined with a simple arithmetic.

Table 1: Sample Size of Wards in the LGAs of the Study Area

LGAs	Wards	2022 Projected Population	Wards Sample Size	Total Number of Households
Zaria	Duste Abba	38,062	07	141
	Dambo	29,153	05	
	Gyallesu	60,446	11	
	Kaura	26,955	05	
	Kufena	47,680	09	
	Kwaribai A	71,770	13	
	Kwaribai B	112,533	21	
	Ungwan Fatika	86,490	16	
	Ungwan Juma	50,095	09	
	Limancin Kona	58,866	11	
	Tukur Tukur	56,172	10	
	Tudun Wada	94,969	18	
	Wuciciri	30,808	06	
Total		763,999	141	141
Igabi	Afaka	82,858	14	149
	Birinin Yero	82,595	14	
	Gadan Gayan	66,844	11	
	Gwaraji	46,853	08	
	Kerawa	47,887	09	
	Kwarau	58,667	10	
	Igabi	76,684	13	
	Rigasa	198,934	34	
	Rigachikun	62,644	11	
	Sabon Birinin Daji	51,805	08	
	Turunku	55,058	09	
	Zango Aya	49,187	08	
	Total		880,016	
Zango Kataf	Gidan Jatau	25,259	08	110
	Gora	22,277	07	
	Kamanton	29,733	09	
	Kamaru Ikulu North	32,615	10	
	Madakiya	24,920	08	
	Ungwan Gaiya	33,815	10	
	Ungwan Rimi	40,196	12	
	Zango Urban	34,561	11	
	Zaman Dabo	17,186	05	
	Zonzon	27,389	08	
	Zonkwa	70,077	22	
Total		358,028	110	110
Grand Total			400	400

Source: Authors compilation from National Population Census figures of 1991

Where:

$$\frac{\text{Sample size of LGA} = \text{LGA Estimated Household Figure} \times \text{Sample Size}}{\text{Total Number of Estimated Households of the three LGAs}} \quad (4)$$

Households sample size per Ward = n/N x Estimated household per LGA (5)

where: N= Total Projected Population for each LGA, n= Projected Ward's Population
 Pearson product moment correlation coefficient (r) statistical tool was used to test for relationship between dependent and independent variables via the following formula.

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n \sum x^2 - (\sum x)^2][n \sum y^2 - (\sum y)^2]}} \quad (6)$$

where r = Pearson product moment correlation coefficient, n = Number of respondents, $\sum xy$ = Sum of the paired respondents, $\sum x$ = Sum of the x scores, $\sum y$ = Sum of the y scores, $\sum x^2$ = Sum of the squared x scores, $\sum y^2$ = Sum of the squared y scores

RESULTS AND DISCUSSION

The result shows that 10.5% of the respondents are less than or equivalent to 25 years of age across the three LGAs under

study. Majority (79%) of respondents are males and are married (76.8%), this is followed by 17.8% that indicated singles (see Table2). Table 2 also shows that 32.2 % of respondents in Igabi LGA have 5-6 children while 38.3% and 27.3% of respondents in Zaria and Zango Kataf LGAs signify having 3-4 children respectively

Table 2: Distribution of Respondents Demographic Profile

Variables	LGAs of the Study					
	Igabi		Zaria		Zango Kataf	
Age	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
≤25	27	18.1	5	3.5	10	9.1
26-30	26	17.4	15	10.6	20	18.2
31-35	26	17.4	24	17.0	13	11.8
36-40	15	10.1	23	16.3	12	10.8
41-45	23	15.4	15	10.6	14	12.7
46-50	16	10.7	36	25.5	9	8.2
51-55	10	6.7	20	14.2	19	17.3
56-60	5	3.4	3	2.1	12	10.9
61-65	1	0.7	-	-	-	-
≥66	-	-	-	-	1	0.9
Total	149	100	141	100	110	100
Sex						
Male	108	72.5	132	92.2	77	70.0
Female	41	27.5	9	6.4	33	30.0
Total	149	100	141	100	110	100
Marital status						
Married	113	75.8	130	92.2	64	58.2
Cohabiting	1	0.7	-	-	-	-
Single	30	20.1	8	5.7	33	30.0
Divorced	4	2.7	3	2.1	13	11.8
Widowed	1	0.7	-	-	-	-
Separated	-	-	-	-	-	-
Total	149	100	141	100	110	100
Number of Children						
None	33	22.7	7	5	25	22.7
1-2	32	21.5	8	5.7	17	15.5
3-4	26	17.4	54	38.3	30	27.3
5-6	48	32.2	32	22.7	29	26.4
≥7	10	6.7	40	28.4	9	8.2
Total	149	100	141	100	110	100
Household Size						
≤ 2	9	6.0	11	7.8	23	20.9
3-4	34	22.8	17	12.1	16	14.5
5-6	52	34.9	42	29.8	42	38.2
7-8	43	28.9	43	30.5	10	9.1
≥ 9	11	7.4	28	19.9	19	17.3
Total	149	100	141	100	110	100

Source: Field Survey, 2023

The highest household size in the study area is five to six as affirmed by approximately 34% of respondents., and 10.8% have a household size that is less than or equivalent to two. The dominant tribe in Igabi and Zaria LGA is Hausa/Fulani as stated by 60.4% and 74.5% respectively while 50.9% of

respondents indicated Northern minority in Zango Kataf LGA, this variation over space is also applicable to religion wherein most respondents in Igabi and Zaria LGA are predominately Muslims while Zango Kataf are predominantly Christians.

Table 3: Distribution of Respondent's Socio-economic Prolife

Variables	LGAs of Study					
	Igabi		Zaria		Zango Kataf	
Ethnicity	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Hausa/Fulani	90	60.4	105	74.5	13	11.8
Yoruba	13	8.7	8	5.7	15	13.6
Igbo	10	6.7	4	2.8	14	12.7
Northern Minority	30	20.1	22	15.6	56	50.9
Southern Minority	6	4.0	2	1.4	12	11.0
Total	149	100	141	100	110	100
Religion						
Christianity	38	25.5	17	12.1	97	88.2
Islam	107	71.8	122	86.5	11	10.0
Traditional	4	2.7	2	1.4	2	1.8
Others	-	-	-	-	-	-
Total	149	100	141	100	110	100
Educational Attainment						
Primary/Basic Education	10	6.7	16	11.3	-	-
Secondary	43	28.9	54	38.3	17	15.5
Tertiary	77	51.7	69	48.9	89	80.9
None	9	6.0	-	-	-	-
Others	10	6.7	2	1.4	4	3.6
Total	149	100	141	100	110	100
Employment Level						
Unemployed	20	13.4	17	12.1	24	21.8
Employed	77	51.7	75	53.9	54	49.1
Under-employed	52	34.9	48	34.0	32	29.1
Total	149	100	141	100	110	100
Type of Occupation						
Farming	12	8.1	14	9.9	36	32.7
None	9	6.0	8	5.7	6	5.5
Civil Service	74	49.7	77	54.6	50	45.5
Artisan	2	1.3	1	0.7	6	5.5
Trading/ Business	35	23.5	27	19.1	12	10.9
Others	17	11.4	14	9.9	-	-
Total	149	100	141	100	110	100
Monthly Income Earned						
< ₦15,000	19	12.8	13	9.2	12	10.9
₦16,000 – ₦30,000	42	28.2	42	29.8	18	16.4
₦31,000- ₦45,000	20	13.4	37	26.2	17	15.5
≥ ₦46,000	68	45.8	49	34.8	63	57.3
Total	149	100	141	100	110	100

Source: Field Survey, 2023

Percentages of those that have attained tertiary educational level are 58.8% followed by secondary educational level which is 28.5%. The respondents are mainly employed with Civil service been the common occupation among the respondents, next to it is trading according to the respondents in Igabi and Zaria LGAs while in Zango Kataf it is farming as indicated by approximately 33% of the respondents. 45% of respondents earn above ₦46,000 or its equivalent monthly while 11% are respondents whose monthly earnings is below or equivalent to the approved minimum wage of ₦15,000 (see Table 3).

Table 4 shows that 16% of the respondents were not aware of NHIS while 43% of respondents are have been exposed to

information on NHIS for less than or equivalent to five years. Main source of information on NHIS is work place as indicated by approximately 25.5% of respondents across the LGAs under study; next to it is the hospital as indicated by 34% and 20.8% in Zaria and Igabi LGA while in Zango Kataf LGA electronic media (18.2%) as the next source of information on NHIS. Respondents that participated immediately after been informed were approximately 41% while those that did not participate immediately after been informed were about 32.8%. Time taken by respondents before participating in NHIS after been informed of the scheme shows that 37.8% indicated less than or equivalent to one year while those that took two years were 22.3%.

Table 4: Respondents' Knowledge on NHIS

Variables	LGAs of the Study					
	Igabi		Zaria		Zango Kataf	
Awareness	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Duration of exposure to the information on NHIS						
≤ 5 years	71	47.7	54	38.3	47	42.7
6-10 years	24	16.1	17	12.1	30	27.3
11-15years	30	20.1	42	29.8	23	20.9
None	26	17.5	28	19.9	10	9.1
Total	149	100	141	100	110	100
Source of information						
Print media	8	5.4	1	0.7	22	20.0
Friend	6	4.0	12	8.5	8	7.3
Family member	21	14.1	19	13.5	9	8.2
Hospital	31	20.8	32	22.7	13	11.8
Office	36	24.2	38	26.9	28	25.5
None	26	17.5	28	19.9	10	9.1
Electronic media	20	13.4	11	7.8	20	18.2
Total	149	100	141	100	110	100
Participate immediately you were informed	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Yes I did	52	34.9	63	44.7	48	43.6
No I did not	54	36.2	30	21.3	47	42.7
It took me time	17	11.4	20	14.2	5	4.5
None	26	17.4	28	19.8	10	9.1
Total	149	100	141	100	110	100
Time taken to participate after been informed						
≤1year	73	49	30	21.3	48	43.6
2years	26	17.4	55	39.0	8	7.3
3years	15	10.1	8	5.7	17	15.5
≥4years	9	6.0	20	14.2	7	6.4
None	26	17.5	28	19.8	30	27.3
Total	149	100	141	100	110	100

Source: Field Survey, 2023

Table 5: Level of Respondents Participation in NHIS

Variables	LGAs of the Study					
	Igabi		Zaria		Zango Kataf	
Participation	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Participate as						
Formal	101	67.8	73	47.2	54	49.1
Informal	22	14.8	40	28.4	26	23.6
None	26	17.5	28	19.8	30	27.3
Total	149	100	141	100	110	100
Principal participant						
Head of Household	110	73.8	82	58.2	73	66.4
Wife	7	4.7	21	14.8	5	4.5
Child	6	4.0	10	7.1	2	1.8
None	26	17.5	28	19.9	30	27.3
Total	149	100	141	100	110	100
Number of children enrolled						
None	59	39.6	7	5.0	50	45.5
≤2	20	13.4	8	5.7	10	9.1
3-4	40	26.8	54	38.3	21	19.1
5-6	11	7.4	40	28.4	17	15.5
All	19	12.8	32	22.7	12	10.8
Total	149	100	141	100	110	100
Duration of participation						
None	26	17.5	28	19.9	30	27.3
≤ 5years	80	53.7	41	29.1	58	52.7

6-10years	21	14.1	37	26.2	16	14.5
≥ 11years	22	14.8	35	24.8	6	5.5
Total	149	100	141	100	110	100

Source: Field Survey, 2023

Percentage coverage of formal participants in NHIS of the study was 57% across the LGA while that of informal was 22%. The Table 5 also shows that 44.8% of respondents have been participating in NHIS for less than five years at the time of this studies while those participating for eleven years or more, were around 15.8%. Heads of households were the principal participants as indicated by 66.3% of the

respondents. Number of family members enrolled by heads of households shows that 28.8% of respondents enrolled 3-4 members of households while those that enrolled 5-6 household members were lower (17%) than those that signifies 3-4 members of the households were enrolled in NHIS (see Table5).

Table 6: Distribution of Respondents' Accredited NHIS HCFs and Distance Covered

Variables	LGAs of the study					
	Igabi		Zaria		Zango Kataf	
Participation	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Treatment obtained from NHIS accredited HCFs						
General hospital	31	20.8	23	16.3	30	27.3
Primary health center	22	14.8	19	13.5	12	10.9
School health center	12	8.1	5	3.5	17	15.5
Private hospitals	34	22.8	37	26.2	35	31.8
Teaching hospitals	24	16.1	29	20.6	6	5.5
None	26	17.5	28	19.9	30	27.3
Total	149	100	141	100	110	100
Distance to accredited NHIS from origin						
≤5Km	80	53.7	54	38.3	54	49.1
6-10Km	26	17.5	33	23.4	8	7.3
≥11Km	17	11.4	26	18.5	18	16.4
None	26	17.5	28	19.8	30	27.3
Total	149	100	141	100	110	100

Source: field Survey, 2023

Generally, respondents affirmed private accredited NHIS HCF as their source of healthcare and it was done by 26.5% across the three LGAs under study. This was followed by those who indicated general hospitals or teaching hospital, and this vary over space in the study. These accredited NHIS HCFs are within the distance of less than or equivalent to 5 km as attested by 47% respondents while those that cover a

distance that is greater or equivalent to eleven (11 km) are only 15.3% (see Table 6).

Pearson product moment correlation coefficient (r) was used to test for relationship between demographic factors and NHIS awareness level. The result is presented on Table 7 and it shows that at a significant level of 0.01, demographic factors of age, respondent's sex, marital status, number of children, household size correlate with awareness in NHIS.

Table 7: Correlation of Demographic Factors and NHIS Awareness

Factors	Age	Sex	Marital Status	Number of Children	Household Size	NHIS Awareness
Age	1	-.189*	-.210*	.315*	-0.054	0.267*
Sex	-.189*	1	.100*	-.096	.039	-.234*
Marital Status	-.210*	.100*	1	-.385*	-.260*	-.221*
Number of Children	0.315*	-.096	-.385*	1	.570*	0.131*
Household Size	-0.054	.039	-.260*	.570*	1	.056
NHIS Awareness	0.267*	-.234*	-.221*	-.260*	.057*	1

Source: Field Survey, 2023

*Implies that the factor is statistically significant at 0.01 significant level

The socio-economic factors that determine NHIS awareness are ethnicity, education and respondent's income. Respondent's educational attainment tends to exhibit more

influence on NHIS awareness than other factors as presented on Table 7.

Table 8: Correlation of Socio-economic Factors and NHIS Awareness

Factors	Ethnic	Religion	Education	Employment	Occupation	Income	NHIS Awareness
Ethnic	1	-.552*	.174*	-.095	-.234*	.079	-.172*
Religion	-.552*	1	-.246*	.003	.168*	-.118	.208
Education	.174*	-.246*	1	-.218*	-.176	.391*	-.252*
Employment	-.095	.003	-.218*	1	.049	-.423*	.024
Occupation	-.234*	.168*	-.176*	.049	1	-.161*	.133
Income	.079	-.118	.391*	-.423*	-.161*	1	-.049
NHIS Awareness	.140*	-.102	.192*	-.374	-.002	.183*	1

Source: Field Survey, 2023

*Implies that the factor is statistically significant at 0.01 significant level

Table 9: Correlation of Demographic Factors and Respondent’s Participation in NHIS

Factors	Age	Sex	Marital Status	Number of Children	Household Size	Participate immediately after been informed	Duration of Respondents Participation in NHIS
Age	1	-.189*	-.210*	.315*	-0.054	.043	0.105*
Sex	-.189*	1	.100*	-.096	.039	-.064	-.050
Marital Status	-.210*	.100*	1	-.385*	-.260*	-.056	.058*
Number of Children	0.315*	-.096	-.385*	1	.570*	-.040	0.018*
Household Size	-0.054	.039	-.260*	.570*	1	-.128	.170*
Participate immediately after been informed	.043	-.064	-.064	-.040	-.128	1	.254*
Duration of Respondent’s participation in NHIS	0.267*	-.234*	-.221*	-.260*	.057*	.254*	1

Source: Field Survey, 2023

*Implies that the factor is statistically significant at 0.01 significant level

The result on Table 9 shows that age correlate with the following factors respondent’s sex, marital status, number of children, household size to participate in NHIS immediately they are been informed about the scheme. Similarly, the duration of respondent’s participation in NHIS is been determined by age, respondent’s sex, marital status, number of children, household size, and immediate participation in

NHIS after been informed of the scheme. Table 10 shows the socio-economic factors that determine participation in NHIS. Educational attainment and types of occupation are the predetermining factors to respondent’s participation in NHIS. This occurs due to its correlation with other factors to promote respondents’ immediate participation in NHIS and duration of respondents’ participation in NHIS.

Table10: Correlation of Socio-economic Factors and Respondent’s Participation in NHIS

Factors	Ethnic	Religion	Education	Employment	Occupation	Income	Participate immediately after been informed	Duration of Participa-tion in NHIS
Ethnic	1	-.552*	.174*	-.095	-.234*	.079	.057	-.008
Religion	-.552*	1	-.246*	.003	.168*	-.118	-.174*	.031
Education	.174*	-.246*	1	-.218*	-.176*	.391*	.242*	.089
Employment	-.095	.003	-.218*	1	.049	-.423*	-.115*	-.211
Occupation	-.234*	.169*	-.176*	.049	1	-.161*	-.026	-.083
Income	.079	-.118	.391*	-.423*	-.161*	1	.165*	.146*
Participate immediately after been informed	0.057	-.174*	.242*	-.115*	-.026	.165*	1	.254*
Duration of Participation in NHIS	-.008	0.031	.089	-.211*	-.083	.146*	.254*	1

Source: Field Survey, 2023

*Implies that the factor is statistically significant at 0.01 significant level

Discussion

The result shows that majority of respondents participating in NHIS are above 26 years of age, this implies that as one grows

older in age the need for quality healthcare becomes pertinence. Besides, it is also linked to the younger age group tending to have themselves and their dependents covered by

the scheme for a longer period (Shafiu et al, 2015). Most respondents are married men whom are also heads of households and in most cases they are the principal participants. This is common in Nigeria due to patriarchal social system wherein women tend to be inaccessible to innovation and information on it. Almost half of the respondents were aware of NHIS within the time frame of less than or equivalent to five years. Despite this increase in awareness it is still low when compared to that observed by Akinyemi et al. (2021) which observed that 95.2% respondents were aware of NHIS in Ibadan. Main source of information on NHIS is the office hence; display the effect of social distance towards awareness in NHIS. Wherein the flow of information is been shared among co-workers or the interface of socio-economic factors as specify by Chapman (1978). Demographic variables with positive correlation ship with awareness in NHIS are age, sex number of children and household size while marital status had a negative correlation ship with NHIS awareness. This implies that awareness in NHIS is based on age, sex number of children and household size. On the other hand, socio-economic variables with positive relationship with awareness in NHIS are ethnicity, educational attainment and income. This affirms Jehu-Appiala et al., (2011), that educational attainment reduces language barrier due to its proxy to information on NHIS. Household size is a minimum of five with respondents having a number of children ranging from three to six but enrolled mainly three to four children. Despite relatively free healthcare acquisition from most private NHIS accredited HCFs as affirmed by respondents, and the information on the benefit-package disseminated by the scheme to participants whom are heads of households, the ability to enroll more family members in NHIS depends on immediate participation in NHIS. When there is a delay in participation it equates to delay in the actualization of universal health coverage (UHC) and decline in the state or Nations' health indices. Immediate response to NHIS participation was done by more respondents compared to the few that did not response immediately they were informed on NHIS. It was found that immediate respond to NHIS participation was determined by age, education, income and household size. These variables positive relationship is not a surprise since the listed demographic factors can make an individual or household seek for leverage in healthcare acquisition, in order to overcome the expenditure incurred from out-of-pocket expenses while the socio-economic variables show the multiple effect of education.

The number of respondents that are formal surpasses those that signify informal that participate in NHIS. The study also shows that those participating in NHIS have at least secondary education and are employed but this does not give the current statistics of employment in the study area neither does employment has a positive significant relationship with participation in NHIS. However, shows that an increase in the educational standard of an area is an advantage to the scheme because it reduces the cost of acquiring information about NHIS. Duration of respondent's participation in NHIS were mainly less than or equivalent to 5years and this is attributed to respondent's income earned per month and their immediate participation in NHIS. Respondents' occupation varies over space despite Civil service been the predominant occupation, others are trading and farming. The variation in occupation could be linked to the difference in physico-geographical, historical and socio-cultural background of the respondents. The finding is similar to Akinyemi et al. (2021) who found that almost 60% of the respondents were male that are married, educated and working class.

Majority of the participants have tertiary education, are employed with a stable income in which premium and capitation can be drawn, thus illustrate the multiple effect of education on NHIS participation since advancement in educational attainment leads to higher knowledge about the scheme and participation (Aregbeshola and Khan, 2018). This has aided the principal participants whom are heads of households to enroll their household members due to the relatively free healthcare obtainable at accredited HCFs in the study area. Preference to the choice of private HCFs as the main accredited NHIS HCF was made by most respondents in the three LGA understudy but the reason for the choice of private accredited HCF was not known.

Most primary or secondary healthcare delivery are obtained from NHIS accredited HCFs that are private or public and are located within the distance of five kilometer less or its equivalent, regardless of its rural or urban characteristics. However, this distance covered by respondents to accredited NHIS HCFs which does not exceed 5 km as affirmed by half of the respondents shows the decentralization of accredited NHIS HCF for accessibility and affordability by its participant. This finding agrees with the result obtained by Jehu-Appiala et al. (2011) and Kumi-Kyereme et al. (2013) that individual household's resident or the location of accredited HCFs determines NHIS participation. All demographic factors influence awareness while educational attainment was the only socio-economic factor seen determine the level of NHIS awareness and it is linked to its less cost effect in disseminating information about NHIS. Respondent's sex, marital status, number of children and household size were needed for immediate participation in NHIS while duration of NHIS participation requires respondent's sex, marital status, number of children, household size, and immediate participation in NHIS. The socio-economic factors influencing immediate participation and duration in NHIS are educational attainment and type of respondent's occupation. This shows the multiple effect of educational attainment on type of occupation and income level to enable the payment of premium and contribution. The study on the long run illustrates the interplay of some predisposing, enabling and need for care factors on NHIS participation.

CONCLUSION

The paper aids to explain the determining factors of NHIS participation of Kaduna State. These determining factors of demographic and socio-economic variables are further characterize into predisposing factors of age, gender, religion, employment, marital status, education, occupation, number of children, household size while enabling factors of income, need factor of immediate participation to NHIS are all factors having negative or positive relationship with NHIS participation in the study area. It is seen that educational level attainment which is a minimum qualification of secondary educational attainment, influences NHIS participation due to its multiple effect of enabling the flow of information either horizontally or vertically, attracts employment and type of occupation thus, leads to steady flow of income for the payment of premium and contribution by participants. Based on the findings made there is need for a comprehensive public awareness on NHIS participation that surpasses the office environment and encourage informal sectors to participate in NHIS is needful. Delay in NHIS participation after been informed about the scheme should be averted.

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