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KNOWLEDGE, ATTITUDE AND PRACTICE LIMITING THE WILLINGNESS TO PARTICIPATE IN HEALTH INSURANCE SCHEME AMONG RESIDENTS OF AUCHI, EDO STATE, NIGERIA

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Abstract
Lack of out- of-pockets resources, poverty, distance to health facilities led to search of alternative methods of health care and to the introduction of National Health Insurance Scheme (NHIS) by the government with the aim of easy access to healthcare at subsidized rate. This study aimed to assess knowledge, attitude, practices limiting the willingness to participate in health insurance scheme among residents of Auchi, Etsako-West Local Government Area, Edo State. This study was conducted in Auchi, Etsako west local government of Edo State, Nigeria. It was a descriptive cross-sectional study with multistage sampling technique involving 280 respondents. Data was collected using a questionnaire and analyzed using SPSS version 26. Most respondents 117(41.8%) were within 21-30 years of age and the mean ± SD age was (31.35 ± 12.17) years. Majority of respondents aren't aware of health insurance 229(81.8%) and out of those that were aware (113), majority have poor knowledge of health insurance 94(83.2%). Majority of respondents 92 (81.4%) felt it was beneficial. Major reason for positive attitude for participation was ability for all members of family to be covered while the major reason for not participating includes preference to pay when ill and diversion of funds to pressing needs. Those with active health insurance was 17(15.0%) with preferred payment frequency of 13(76.5%). Main determinant limiting willingness to participate in health insurance was lack of awareness 179(64%). There wasn't any significant statistical association relating socio- demographic variables to attitude and practice of health insurance except the that there was significant statistical association between marital status and knowledge of health insurance (p< 0.024). The study indicated the need to increase knowledge, attitude, and practice and eliminate determinants limiting willingness to participate in health insurance amongst residents of Auchi community.

Keywords: *Knowledge, Attitude, Practice, Health Insurance Scheme, Auchi.*

I. INTRODUCTION

Health insurance is a contract between an insurer and an insured (individual or group of persons) which requires the insurer to pay part or all of a person health care bills in exchange for a premium.1 There are two main types of health insurance which include private and public also known as government health insurance.

Many people in the developing countries don't have access to health care because of the high cost which is a result of poverty. According to the commission on macroeconomic and health of WHO it was observed that poverty is a major factor in the developing countries, why they are less likely to seek medical care either because of distance, lack of out- of - pockets resources or knowledge of how best to respond to an episode of illness.

An alternative method was tried in Nigeria for making health care accessible and affordable which include medical expenses health insurance scheme and private health insurance scheme but was not successful which lead to such "provider" like spiritual homes, self-medication and traditional health clinics. Then the government introduced National health care scheme (NHIS) by decree No. 35 of 1999 with the aim that every Nigerian have access to health care service at affordable cost.

KNOWLEDGE OF HEALTH INSURANCE SCHEME

Choosing and making utmost use of health insurance plan is influenced by; state regulations, plan benefits, quality of support received during selection or usage of health insurance and health insurance-related knowledge and skill.

A cross sectional study conducted in Riyadh, Kingdom of Saudi Arabia in 2017, revealed an association between expatriates' education and knowledge of health insurance benefit i.e. the higher the education level, the higher the knowledge score. It also showed that minority workers in larger companies have better knowledge of health insurance benefits compared to smaller companies which supports the facts that employers can serve as first source of health insurance information. There were slight difference between what people think they know and what they truly know. Variable percentage were found among those who believed they knew their copayments, 115 knew the copayment for general practitioner, 90% for outpatient, 31.6% for inpatient visit, 19% for prescription drug, 22% for dental services. Language was seen to be a restricting factor due to the fact that most health insurance website were written in Arabic and English while most expatriates could read Urdu, Hindi, Malaylam and Bengali.

Similar study done with 748 respondents in Belabela, Edendale, Nelson Mandela Metropolitan area all in South Africa in 2013, showed that 80.3% had heard of National Health Insurance while 19.7% had not, 24.7% understood the concept while 71.8% didn't, 25.2% had knowledge of the meaning of National Health Insurance, 48.1% knew that health insurance could cater for medical expenses while 48.15 did not, 53.3% knew that people from both economic status would receive proper healthcare, 37.5% knew that sick people would receive largest share of healthcare while 44.15 didn't and 18.4% were incorrect, 46.9% knew that similar standard of healthcare was expected from private and public healthcare providers while 50.1% didn't, 52.7% knew health insurance improves preventive healthcare while 44.6% didn't, 44.1% knew government have started to implement it while 53.3 % didn't, 40.3% understood that employers will pay a monthly amount to national health insurance for each worker while 54.65 didn't, 41.9% knew that employers would act in conjunction with National Health Insurance to ensure tax payers make their contributions, 42.7% knew that each person pays a stipulated amount required by law as monthly payment to the National Health Insurance Fund, 54.5% knew that a large portion of the funding comes from general taxes and 47.1% understood that all beneficiaries enter the healthcare system at the primary healthcare level.

An observational cross sectional study carried out in Ugu, South Africa in 2017 showed that 70% learned from health facilities while 30% from media, 66.6% had basic information of National Health Insurance, 33% were familiar with details of objectives of National Health Insurance.

Likewise a study done in Gwagwalada, Federal Capital Territory, Abuja in 2014 made it clear that awareness level of Community Based Health Insurance was high due to constant sensitization and awareness campaign organized in communities by Federal Capital Territory Health and Human Service Secretariat alongside Federal

Capital Territory MDG"s office. Approximately 80% of respondents felt that there money fully covers health services they receive from Community Based Health Insurance and were not aware that the government pays a large chunk of the cost of care in the form of subsidy. They expected a refund of unused health insurance premium due to their lack of understanding of the principle of risk pooling.

ATTITUDE TOWARDS HEALTH INSURANCE SCHEME

In 2021, a descriptive study in India, showed out of 352 insured respondent, 29% subscribed due to employer's contribution, 27% subscribed to have good quality treatment, 24% subscribed against future illnesses, old age,10% due to pre-existing illnesses, 8% due to tax planning measure and 2% due to travelling abroad.

With regards to a study done in Ugu, South Africa in 2017, it pointed out that 78% would adhere to requirements of NHIS.47.6% believed it was the healthcare responsibility while 52.4% believed it was an individual responsibility.

From a study conducted by Bassi et al in 2021, 70.7% had good attitude towards health insurance with an age range of 30-39, 20.7% had fair attitude towards health insurance with an age range of 20-29 and 8.7% had poor attitude. Married couples had good and fair attitude towards NHIS while single people constituted a huge chunk of those with poor attitude.

Following a study carried out by Yusuf et al in Lagos in, it revealed that majority of participants (85.2%) felt health insurance was a good idea and 1.9 % felt it was a bad idea, 5.3% thought the scheme would improve if a portion of premium was refunded to the enrollees or rolled over if not used in a year. 62.5% of respondents had positive attitude towards Community Based Health Insurance while 37.5% had negative attitude.

PRACTICE OF HEALTH INSURANCE SCHEME

A study done in Ugu, South Africa, 2017, 61% felt NHIS was helpful while 38% felt otherwise. With regards to a study conducted by Yusuf et al in Lagos in, approximately 92.8% were not enrolled in CBHIS due to ignorance, 65.8% out of the 92.8% were willing to enroll, 4.5% were enrolled with their premium paid till date while 2.6% were enrolled without an up to date premium.

In addition, a study done by Bassi et al in 2021 showed 13.3% of total population registered for NHIS of which 30% enrolled in first 5 years and 70% enrolled after five years.

DETERMINANTS LIMITING WILLINGNESS TO PARTICIPATE IN HEALTH INSURANCE SCHEME

Establishment of health insurance programmes require reforming of health sector at all levels. Developing countries face a greater challenge when seeking to adopt a health insurance program. Not to mention, health insurance consumer are burdened with the obligation to have knowledge, ability and confidence to purchase and use health insurance while healthcare system have the responsibility to breakdown the process and information alongside helping consumers navigate the system. Unmet expectation in health reform, high out of pocket payments and health reform policies (federal and state) serve as hindrances to participation in healthcare.

A research carried out in Dakar, Senegal listed the main hindrance to participation in health insurance as low income, reduced access to social networks, ethnic group (higher in wolofs than Serere and Peulh) and religion. Proffered solutions from article include: government subsidies, flexibility in payment procedure, and provision of in-depth information, organizing and promoting community financing schemes.

However, a community-based mixed cross-sectional study conducted in 2020 showed a positive relationship between presence of chronically ill members (about 4.6 times more) and willingness to participate in Community Based Health Insurance.

With regards to a study done in Awutu Senya West District in Central Region of Ghana, it showed low participation amongst women due to low economic and social position relative to men, high patriarchal nature among rural communities, seeking for alternative healthcare services aside

orthodox health system, decrease asset ownership, low educational and income levels.

According to a study done Ghana in 2017, it showed that people's decision not to participate depends on good health status, rarely falling sick, belief that health insurance is for the poor and sick, low literacy level and lack of information.

Adebayo, Uthman and Ataguba in 2015 pointed out predictors to low willingness to participate as poor knowledge of benefit package, institutional rigidities in payment modalities, age of household head, marital status, household illness experience, number of illness episodes in a specified time frame, lack of use of modern medicine, household travel distance, lack of trust and technical incompetence amongst providers.

From a survey conducted in Gwagwalada, Federal Capital Territory, Abuja, lack of trust, lack of adequate understanding of how the scheme works, poor access to healthcare facilities, poor quality of health services inability to fund premium were some of the obstacles to becoming members of Community Based Health Insurance.

According to study done in Olowora community, Kosofe Local government area, Lagos, showed that the cause of low health insurance culture was due to weak financial institutions, 44.2% of respondents didn't believe in contributing for illnesses yet to come while 72.3% prefer to pay for healthcare when ill, 45.6% which accounted for non-enrolment was due to lack of information which proves that knowledge is a vital empowering tool, 27% pointed out failure in premium payment was due to poor quality of care while 51.5% said it was due to insufficient fund.

Moreover, a cross sectional survey conducted at Federal Teaching Hospital, Abakaliki, Ebonyi in 2018, highlighted poor understanding of how system works, lack of regular income source, fear of mismanagement of funds, health insurance not needed, large household size, lack of spousal support.18

Furthermore, socio-religious factor is also a predictor, some communities view it as a taboo, and some view it as wishing oneself evil. In a part of Nigeria, precisely Yoruba communities, planning for future health problems is against the culture with the saying "Ma se se eniyan ola, ola ni yoo se aniyan ara re" meaning "don't plan for tomorrow, tomorrow will plan for itself". Proposed solution in this article includes; massive enlightenment of the people, compulsory basic health insurance, sensitisization of stakeholders (regulators, service providers, health maintenance organization (HMO)) on effective and efficient medical service delivery.

II. MATERIALS AND METHODS

STUDY POPULATION

Population of persons in auchi was about 140,612 as at 1995 and about 150,000 as at the time of the last census in 2006. No data presently on the projected population of Auchi residents as at 2022 from numerous researches.

Study Design

A descriptive cross sectional design was carried out among residents of Auchi, Etsako West Local Government area of Edo State

Study Duration

This study took place within the time frame of four months i.e. May, 2022 to October 2022. Table showing time frame is in the appendix.

Selection Criteria

Inclusion criteria

Respondents of 18yrs of age and above who resides in the selected community and showed willingness to participate in the study were involved.

Exclusion criteria

Visitors and workers who don't reside in selected community were excluded.

Sample Size Determination

Sample size was estimated using William Cochran's method for cross sectional survey

Sample size $n = Z^2Pq$

d^2

n = Sample size

Z = Standard normal deviation set at 1.96 to correspond to 95% confidence interval.

P = highest Prevalence of the condition under study from previous studies.

q = 1-P

d = Degree of precision at a confidence level of 95% (Error margin allowed from study which is a measure of level of accuracy).

For this study;

Z = I.96

P = 80.3 = 0.803 (highest prevalence from literature review).....6

d = 0.05

From the formula; n = Z2Pq

d2

. n = (1.96)2 × 0.803 × (1- 0.803)

(0.05)2

n = 3.8416 × 0.803 × 0.197 = 0.608

0.0025 0.0025

n = 243.2

Attration rate is n/(1-0.1)

243.2/ (1-0.1)

=270.2 approximately 270 households

SAMPLING METHOD

A multistage sampling technique was used for this survey. Auchi was used as study area, 3 grand quarters were selected out of the 5 grand quarters. Each grand quarter had five villages, of which 3 were selected in each. Each village had about 20 streets and were labeled 1-20 and used to create a sampling frame. A sample of 10 streets was taken to calculate the sample interval which was 2. Thus a sampling fraction of 1:2 was used to select the streets. In this stage a cluster sampling technique was employed as all the houses or settlement around each selected street were sampled until the required number of respondent was gotten.

STUDY INSTRUMENTS

A structured closed-ended and unstructured open-ended questionnaire which provides primary quanlitative data was used. This paper based questionnaire survey instrument was derived or adapted based on study objectives or from previous survey, studies or reviews pertaining to health insurance. The questions were in simple English language, short and direct to prevent misunderstanding. The questionnaire was divided into five sections:

METHOD OF DATA COLLECTION

An information sheet, ethics approval and written consent form (which can also be read out) was provided to each respondent or participant. We informed our respondents that names or identities will not be needed, information given was highly confidential and was only be used for this research. Responses were made via use of tick sign or simple appropriate words. Research assistant were trained within a month on how to administer consent form, collect, analyze and interpret data.

DATA ANALYSIS

STATISTICAL ANALYSIS

Responses or feedback gotten from survey was transcribed from paper into electronic database using the software Statistical Package for Social Sciences (SPSS) software version 26 and presented in form of numerical, tabular and diagrammatic presentations.

Both descriptive statistics and Chi-square test were used to analyze generated data. Level of statistical significance, P, was set at 5%. Level of confidence was 95%. The occupation of respondents was grouped into skill level 0-4 according to International Labour Organization – International Standard Classification of Occupation -08 (ILO-ISCO-08) which was modified to include skill level 0

Skill level 0 includes retiree, housewives, unemployed, students

Skill level 1 includes petty traders, plumbers, security men, labourers, cleaners

Skill level 2 includes wholesale traders, receptionist, sales personnels, bus drivers, farmers, tailors, community health extension workers, etc.

Skill level 3 includes technicians, furniture markers, civil servants (without job specification), etc

Skill level 4 includes nurses, engineers, teachers, bursar, doctors, bankers and managers.

SCORING VARIABLES

The questionnaire checked the association between dependent and independent variables, dependent variables being "health insurance" and independent variables being "lack of awareness", "low income", "level of trust in government

programs", "religious beliefs", "poor transparency of funds", "sociodemographic factors", "feeling of being healthy", "lack of decision making ability"and "excessively rigid enrolment criteria. Knowledge was graded in this study using a 5-point likert scale i.e very poor, poor, average, good, and excellent.

ETHICAL CONSIDERATION

Ethical approval for the study was obtained from Irrua Specialist Teaching Hospital Research Ethics Committee. Finally, a written informed consent was obtained from the respondents before questionnaires were administered. Information given was highly confidential. Consent was obtained via written or oral. There was also being provision for translation of consent form for participant who can't read or write.

III. RESULT

A total of 280 respondents participated in the study. The results are presented in sections as follows:

Table 1a: Socio-Demographic Characteristics Of Respondents

Variables	Frequency (n=280)	Percent
Age in years		
≤ 20	53	18.9
21 – 30	117	41.8
31 – 40	56	20.0
41 – 50	30	10.7
51 – 60	15	5.4
> 60	9	3.2
Mean age ± SD (31.35 ± 12.170)		
Sex		
Male	164	58.6
Female	116	41.4
Marital Status		
Single	155	55.4
Married	116	41.4
Separated	2	0.7
Divorced	4	1.4
Widowed	3	1.1
Ethnicity		
Etsako	179	63.9
Benin	19	6.8
Owan	17	6.1
Esan	12	4.3
Igala	11	3.9
Isoko	10	3.6
Igbo	8	2.9
Urhobo	7	2.5
Yoruba	7	2.5
Ibibio	3	1.1
Others	7	2.5
Religion		
Christianity	180	64.3
Islam	97	34.6
ATR*	2	0.7

Others/None	1	0.4
Level of Education		
No Formal Education	5	1.8
Primary	26	9.2
Secondary	108	38.6
Tertiary	151	50.4

*African Traditional Religion

Table 1b: Socio-Demographic Characteristics Of Respondents

Variables	Frequency (n=280)	Percent
Skill Level		
Level 0	109	38.9
Level 1	104	37.1
Level 2	35	12.5
Level 3	17	6.1
Level 4	15	5.4
Household Size		
One to Four	142	50.7
Greater than Four	138	49.3
Employment status		
Private Sector	22	7.9
Government Sector	24	8.6
Self-Employed	143	51.1
Unemployed	8	2.9
Student	79	28.2
Retired	4	1.4
Monthly Income		
<N 10000	158	56.4
N 10000 –<N 20000	18	6.4
N 20000 – <N 50000	55	19.6
N 50000 – <N 100000	27	9.6
N 100000 – <N 200000	13	4.6
≥ N 200000	9	3.2

Table 1 shows the socio-demographic characteristics of the respondents; the highest proportion of respondents (41.8%) were 21 – 30 years with a mean age of 31.35 (19.18 –43.52) years. Over half, 164 (58.6%) of the 280 respondents were male while others were female; over half of the respondents (55.4%) were also single and about two-fifth (41.4%) were married. The majority of respondents (63.9%) were Etsako and Christians (64.3%) and about half the respondents had tertiary level of education.

Most respondents either had Skill Level 0 (38.9%) or Skill Level 1 (37.1%) and about half (50.7%) had family size of 1 – 4 persons while others had above 4.

More than half the respondents (51.1%) were self-employed and more than half (56.4%) also earned below N 10000.

Table 2: Knowledge Of Health Insurance

Variable	Frequency (n=280)	Percentage
Does Health Insurance exist in		

this Community?		
Yes	51	18.2
No	229	81.8
How long has health insurance being in existence in this community? (n = 51)		
< 6 months	1	2.0
6 months – 12 months	8	15.7
12 months – 18 months	5	9.8
18 months – 24 months	5	9.8
> 2 years	32	62.7

In Table 2 only 51 (18.2%) of respondents affirmed the presence of health insurance in the community; of which 32 (62.7%) responded that it has existed for over 2 years.

Table 3: Knowledge Of Health Insurance

Variables	Frequency (n=113)	Percent
Understanding of Health Insurance		
Very Poor	30	26.5
Poor	36	31.9
Average	28	24.8
Good	12	10.6
Excellent	7	6.2
Known Type of Health Insurance*		
Public Health Insurance	42	37.2
Private Health Insurance	26	23.0
Community Health Insurance	13	11.5
Aims of Health Insurance*		
To Provide Coverage for People in Informal Sectors	11	9.7
To Ensure Equal Distribution of Healthcare	20	17.7
To Improve Access to Healthcare Services	21	18.6
To Improve Availability of Healthcare Services	27	23.9
To Improve Affordability of Healthcare Services	32	28.3
To Maintain High Standard of Healthcare Services to People	25	22.1
Do you share Knowledge of Health Insurance with Family and Friends		
Yes	39	34.5
No	74	65.5

Perceived Areas that Health Insurance Covers*		
General Practitioner Visits	49	43.4
Outpatient Visits	27	23.9
Inpatient Visits	17	15.0
Prescription of Drugs	26	23.0
Dental Services	9	8.0
Surgery	16	14.2

*Multiple Response Allowed

Table 3 shows the responses assessing knowledge of respondents; only 7 (6.2%) of the 113 respondents who were aware of health insurance had an excellent understanding of health insurance. Forty-two (37.2%) knew of public health insurance, 26 (23.0%) knew of private health insurance and 13 (11.5%) knew of community health insurance.

The predominant opinion of respondents on the aim of health insurance were; to improve affordability of healthcare services 32 (28.3%), to improve availability of healthcare services 27 (23.9%) and to maintain high standard of healthcare services to people 25 (22.1%).

Only 39 (34.5%) of the 113 respondents who knew of health insurance share knowledge of health insurance with family and friends and about 49 (43.4%), 27 (23.9%) and 26 (23.0%) of the 113 respondents who knew of health insurance knew that health insurance cover general practice visits, outpatient visits and prescribed drugs.

Table 4a: Association Between Socio-Demographics And Knowledge Of Health Insurance Of Respondents

Variables	Knowledge of Health Insurance		Test Statistics	p-value
	Good (n = 19) Freq (%)	Poor (n = 94) Freq (%)		
Age in years				
≤ 20	1 (8.3)	11 (91.7)	$\chi2 = 8.031$	0.155
21 – 30	5 (11.1)	40 (88.9)		
31 – 40	9 (30.0)	21 (70.0)		
41 – 50	1 (6.3)	15 (93.7)		
51 – 60	2 (33.3)	4 (66.7)		
> 60	1 (25.0)	3 (75.0)		
Sex				
Male	14 (19.2)	59 (80.8)	$\chi2 = 0.824$	0.364
Female	5 (12.5)	35 (87.5)		
Marital Status				
Single	4 (7.4)	50 (92.6)	$\chi2 = 7.437$	0.024*
Married	14 (24.6)	43 (75.4)		
Divorced	1 (50.0)	1 (50.0)		
Religion				
Christianity	11 (15.3)	61 (84.7)	Fischer's Exact = 0.907	0.824
Islam	8 (20.5)	31 (79.5)		
ATR**	0 (0)	1 (100)		
Others/None	0 (0)	1 (100)		

Level of Education			
No Formal Education	0 (0)	1 (100)	Fischer's Exact 0.641
Primary	0 (0)	6 (100)	= 1.682
Secondary	5 (15.6)	27 (84.4)	
Tertiary	14 (18.9)	60 (81.1)	

*Statistically Significant **African Traditional Religion

Table 4b: Association Between Socio-Demographics And Knowledge Of Health Insurance Of Respondents…

Variables	Knowledge of Health Insurance		Test Statistics	p-value
	Good (n = 19) Freq (%)	Poor (n = 94) Freq (%)		
Skill Level				
Level 0	5 (12.8)	34 (87.2)	$\chi2$ = 2.991	0.559
Level 1	9 (19.6)	37 (80.4)		
Level 2	1 (11.1)	8 (88.9)		
Level 3	1 (10.0)	9 (90.0)		
Level 4	3 (33.3)	6 (66.7)		
Household Size				
One to Four	11 (20.8)	42 (79.2)	$\chi2$ = 1.108	0.292
Greater than Four	8 (13.3)	52 (86.7)		
Employment status				
Private Sector	1 (9.1)	10 (90.9)	Fischer's Exact =	0.863
Government Sector	3 (18.8)	13 (81.2)	1.889	
Self-Employed	10 (18.5)	44 (81.5)		
Unemployed	0 (0)	2 (100)		
Student	4 (14.8)	23 (85.2)		
Retired	1 (33.3)	2 (66.7)		
Monthly Income				
<N 10000	7 (13.5)	45 (86.5)	Fischer's Exact =	0.416
N 10000 – <N 20000	3 (30.0)	7 (70.0)	4.712	
N 20000 – <N 50000	3 (12.5)	21 (87.5)		
N 50000 – <N 100000	3 (25.0)	9 (75.0)		
N 100000 – <N 200000	3 (30.0)	7 (70.0)		
≥ N 200000	0 (0)	5 (100)		

Table 4 shows the relationship between the knowledge of respondents on health insurance and socio-demographic characteristics. The relationship between marital status and knowledge of respondents was found statistically significant with more married (24.6%) respondents having good knowledge of health insurance than singles (7.4%)

Table 5: Attitude Of Respondents Towards Health Insurance

Variables	Frequency (n=113)	Percent
Do you think Health Insurance is Beneficial?		
Yes	92	81.4

No	21	18.6
Would you Recommend Health Insurance to anyone?		
Yes	79	69.9
No	34	30.1
If Yes, Reasons for Recommending Health Insurance* (n = 79)		
Convenience	27	34.2
Cheap to Participate in	24	30.4
All Family members get covered	34	43.0
Out of Pocket Expenditure too expensive	24	30.4
If No, Why would you not recommend Health Insurance?* (n = 34)		
Prefers to pay for Healthcare only when ill	7	20.6
Prefers to spend money on other pressing needs	4	11.8

*Multiple Response Allowed

Table 5 shows attitude of respondents towards health insurance among respondents who knew of health insurance; 92 (81.4%) of respondents thought it beneficial and 79 (69.9%) would recommend health insurance to anyone while 34 (30.1%) would not.

The most predominant reason (43.0%) for which respondents would recommend health insurance among the 79 respondents who would, was because all family members could get covered; while the reasons for which respondents would not recommend health insurance included that they preferred to pay for healthcare services only when ill and they preferred to spend on pressing needs.

Table 6a: Association between Socio-Demographics And Attitude Of Respondents Towards Health Insurance

Variables	Attitude towards Health Insurance		Test Statistics	p-value
	Good (n = 78) Freq (%)	Poor (n = 35) Freq (%)		
Age in years				
≤ 20	7 (58.3)	5 (41.7)	Fischer's Exact = 5.547	0.338
21 – 30	31 (68.9)	14 (31.1)		
31 – 40	19 (63.3)	11 (36.7)		
41 – 50	13 (81.2)	3 (18.8)		
51 – 60	6 (100)	0 (0)		
> 60	2 (50.0)	2 (50.0)		
Sex				
Male	53 (72.6)	20 (27.4)	$\chi 2 = 1.234$	0.267
Female	25 (62.5)	15 (37.5)		

Marital Status				
Single	35 (64.8)	19 (35.2)	$\chi 2 = 1.365$	0.505
Married	42 (73.7)	15 (26.3)		
Divorced	1 (50.0)	1 (50.0)		
Religion				
Christianity	47 (65.3)	25 (34.7)	Fischer's Exact = 4.055	0.257
Islam	30 (76.9)	9 (23.1)		
ATR**	1 (100)	0 (0)		
Others/None	0 (0)	1 (100)		
Level of Education				
No Formal Education	0 (0)	1 (100)	Fischer's Exact = 3.442	0.320
Primary	3 (50.0)	3 (50.0)		
Secondary	22 (68.8)	10 (31.2)		
Tertiary	53 (71.6)	21 (28.4)		

*Statistically Significant **African Traditional Religion

Table 6b: Association between Socio-Demographics and Attitude of Respondents towards Health Insurance…

Variables	Attitude of Respondents towards Health Insurance		Test Statistics	p-value
	Good (n = 78) Freq (%)	Poor (n = 35) Freq (%)		
Skill Level				
Level 0	26 (66.7)	13 (33.3)	$\chi 2 = 5.031$	0.284
Level 1	32 (69.6)	14 (30.4)		
Level 2	7 (77.8)	2 (22.2)		
Level 3	9 (90.0)	1 (10.0)		
Level 4	4 (44.4)	5 (55.6)		
Household Size				
One to Four	34 (64.2)	19 (35.8)	$\chi 2 = 1.110$	0.292
Greater than Four	44 (73.3)	16 (26.7)		
Employment status				
Private Sector	6 (54.5)	5 (45.5)	Fischer's Exact = 3.100	0.700
Government Sector	11 (68.8)	5 (31.2)		
Self-Employed	40 (74.1)	14 (25.9)		
Unemployed	2 (100)	0 (0)		
Student	17 (63.0)	10 (37.0)		
Retired	2 (66.7)	1 (33.3)		
Monthly Income				
<N 10000	35 (67.3)	17 (32.7)	$\chi 2 = 1.366$	0.928
N 10000 – <N 20000	6 (60.0)	4 (40.0)		
N 20000 – <N 50000	17 (70.8)	7 (29.2)		
N 50000 – <N 100000	8 (66.7)	4 (33.3)		
N 100000 – <N 200000	8 (80.0)	2 (20.0)		
≥ N 200000	4 (80.0)	1 (20.0)		

Table 6 shows the relationship between attitude of respondents towards health insurance and the socio-demographic characteristics of respondents. No component of respondents' socio-demographic characteristics was statistically significant in association with attitude towards health insurance.

Table 7: Association between Knowledge And Attitude Of Respondents Towards Health Insurance

Variables	Attitude towards Health Insurance		Test Statistics	p-value
	Good n = 78 Freq (%)	Bad n = 35 Freq (%)		
Knowledge of Health Insurance				
Good Knowledge	16 (84.2)	3 (15.8)	$\chi 2 = 2.463$	0.117
Poor Knowledge	62 (66.0)	32 (34.0)		

Table 7 shows the relationship between the knowledge of health insurance and respondents' attitude to it. This relationship showed that more respondents with good knowledge have good attitude towards health insurance. However, the relationship was not statistically significant.

Table 8: Practice of Health Insurance among Respondents

Variables	Frequency (n=113)	Percent
Where do you seek Health Treatment?		
Health Facility	98	86.7
Traditional treatment	18	15.9
Self-Treatment	35	31.0
Do you have a Chronic Disease?		
Yes	11	9.7
No	102	90.3
Do you have an active Health Insurance?		
Yes	17	15.0
No	96	85.0
Type of Health Insurance Used (n = 17)		
Private Health Insurance	10	58.8
Public Health Insurance	7	41.2
Mode of Health Insurance (n = 17)		
Group Insurance	5	29.4
Individual Insurance	12	70.6
Preferred Payment Frequency		
Monthly	13	76.5
Biannually	1	5.9
Annually	3	17.6
Are you willing to renew your		

premium?		
Yes	9	52.9
No	1	5.9
Undecided	7	41.2

Table 8 shows respondents' practice of health insurance. 98 (86.7%) of the 113 respondents who knew of health insurance sought treatments from health facilities. Eleven (9.7%) have a chronic disease.

Only 17 (15.0%) of the 113 respondents have an active health insurance among which 10 (58.8%) used private health insurance and 7 (41.2%) used public health insurance systems, and 12 (70.6%) were registered in individual insurance and 5 (29.4%) in group insurance.

Thirteen (76.5%) of the 17 respondents who were actively involved in a health insurance system preferred monthly payments, 3 (17.6%) preferred annual payments and 1 (5.9%) biannual payment; 9 (52.9%) were willing to renew their insurance premium, 1 (5.9%) was not going to renew and 7 (41.2%) were yet undecided.

Table 9a: Association between Socio-Demographics And Practice Of Health Insurance Amongrespondents

Variables	Do you have an active Health Insurance?		Test Statistics	p-value
	Yes (n = 17) Freq (%)	No (n = 96) Freq (%)		
Age in years				
≤ 20	1 (8.3)	11 (91.7)	Fischer's Exact = 7.205	0.151
21 – 30	11 (24.4)	34 (75.6)		
31 – 40	2 (6.7)	28 (93.3)		
41 – 50	1 (6.2)	15 (93.8)		
51 – 60	2 (33.3)	4 (66.7)		
> 60	0 (0)	4 (100)		
Sex				
Male	12 (16.4)	61 (83.6)	$\chi 2 = 0.314$	0.575
Female	5 (12.5)	35 (87.5)		
Marital Status				
Single	10 (18.5)	44 (81.5)	Fischer's Exact = 1.046	0.592
Married	7 (12.3)	50 (87.7)		
Divorced	0 (0)	2 (100)		
Religion				
Christianity	11 (15.3)	61 (84.7)	Fischer's Exact = 4.632	0.260
Islam	5 (12.8)	34 (87.2)		
ATR**	1 (100)	0 (0)		
Others/None	0 (0)	1 (100)		
Level of Education				
No Formal Education	0 (0)	1 (100)	Fischer's Exact = 1.468	0.654
Primary	0 (0)	6 (100)		
Secondary	4 (12.5)	28 (87.5)		
Tertiary	13 (17.6)	61 (82.4)		

**African Traditional Religion

Table 9b: Association between Socio-Demographics And Practice Of Health Insurance Among Respondents…

Variables	Do you have an active Health Insurance?		Test Statistics	p-value
	Yes (n = 17) Freq (%)	No (n = 96) Freq (%)		
Skill Level				
Level 0	8 (20.5)	31 (79.5)	$\chi2 = 3.553$	0.447
Level 1	4 (8.7)	42 (91.3)		
Level 2	2 (22.2)	7 (77.8)		
Level 3	2 (20.0)	8 (80.0)		
Level 4	1 (11.1)	8 (88.9)		
Household Size				
One to Four	6 (11.3)	47 (88.7)	$\chi2 = 1.083$	0.298
Greater than Four	11 (18.3)	49 (81.7)		
Employment status				
Private Sector	1 (9.1)	10 (90.9)	Fischer's Exact = 5.480	0.309
Government Sector	2 (12.5)	14 (87.5)		
Self-Employed	6 (11.1)	48 (88.9)		
Unemployed	1 (50.0)	1 (50.0)		
Student	7 (25.9)	20 (74.1)		
Retired	0 (0)	3 (100)		
Monthly Income				
<N 10000	9 (17.3)	43 (82.7)	Fischer's Exact = 1.636	0.911
N 10000 – <N 20000	1 (10.0)	9 (90.0)		
N 20000 – <N 50000	5 (20.8)	19 (79.2)		
N 50000 – <N 100000	1 (8.3)	11 (91.7)		
N 100000 – <N 200000	1 (10.0)	9 (90.0)		
≥ N 200000	0 (0)	5 (100)		

Table 9 shows the relationship between having an active health insurance and the socio-demographic characteristics of respondents. No variables of respondents' socio-demographic characteristics and practice of health insurance had significant statistical association .

Table 10: Association between Knowledge And Attitude Of Respondents Towards And Practice Of Health Insurance

Variables	Do you have an active Health Insurance?		Test Statistics	p-value
	Yes (n = 17) Freq (%)	No (n = 96) Freq (%)		
Knowledge of Health Insurance				

Good Knowledge	3 (15.8)	16 (84.2)	$\chi 2 = 0.010$	0.921
Poor Knowledge	14 (14.9)	80 (85.1)		
Attitude towards Health Insurance				
Good Attitude	14 (17.9)	64 (82.1)	$\chi 2 = 1.662$	0.197
Poor Attitude	3 (8.6)	32 (91.4)		

Table 10 shows the relationship between knowledge and attitude towards health insurance and its influence on having an active health insurance. More respondents who had good knowledge of health insurance (15.8%) were actively involved in health insurance compared to proportion of those who had poor knowledge and were involved in an active health insurance (14.9%). More respondents who had good attitude of health insurance (17.9%) were actively involved in health insurance compared to proportion of those who had poor attitude that were involved in an active health insurance (8.6%). However these relationships were not statistically significant.

DETERMINANTS LIMITING WILLINGNESS TO PARTICIPATE IN HEALTH INSURANCE

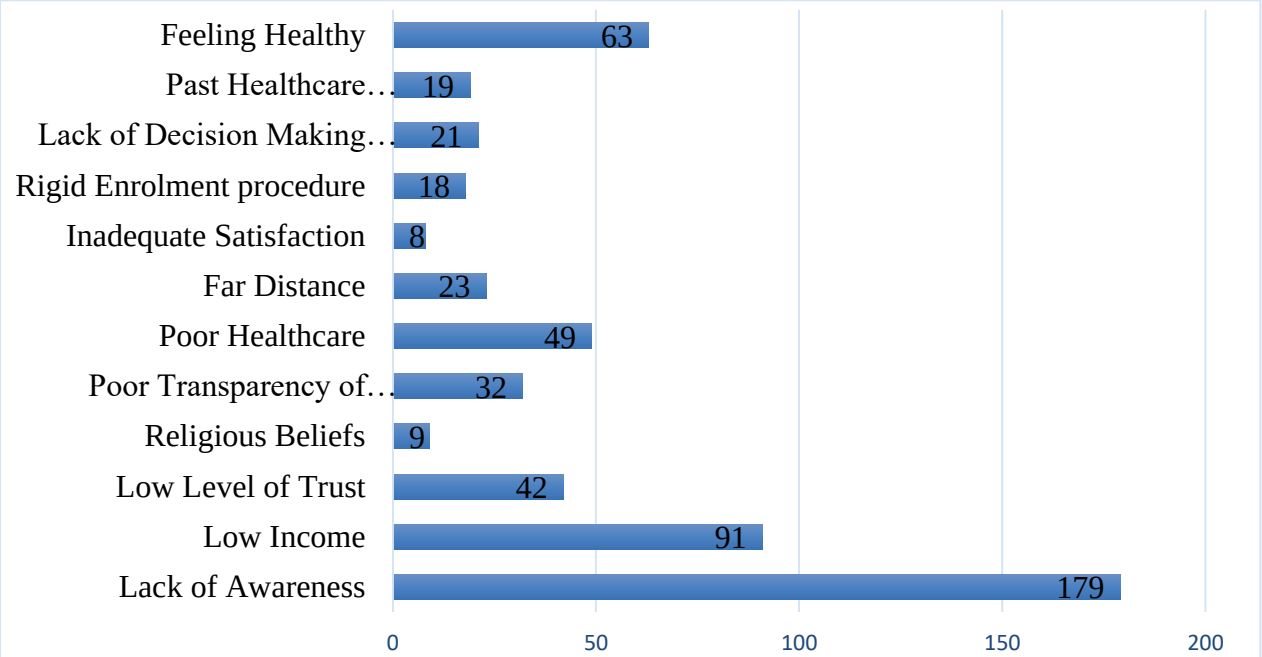

FIG. 1: FACTORS PREVENTING ASSESSING HEALTH INSURANCE

Predominant reasons for not partaking in health insurance schemes were lack of awareness of health insurance and low income to partake in it.

IV. DISCUSSION

The highest proportion of respondents in the study were aged 21 – 40 years, over half were male and single. This shows that a higher proportion of residents in Auchi were in the working class age group. Most respondents were Etsako and Christians. Most respondents had either secondary or tertiary level of education, but had

jobs within Skill Level 0 or Skill Level 1 according to the Modified International Labour Organization (ILO) classification of Occupations and were predominantly self-employed and over half responding to be earning less than N 10000 per month. This shows the a high level of unemployment in this community in spite of belonging to working class age group and having the highest levels of education (tertiary and secondary).

Only two-fifth of respondents was aware of health insurance, among which most had heard from either television or health worker and only a few heard of it through insurance agencies, family members or through the radio. Among respondents who knew of health insurance only very few knew of community-based health insurance schemes. This is unlike the study done in Abuja in 2014 which showed that most respondents were aware of health insurance, especially community-based health insurance scheme and had gotten informed by constant sensitization and awareness campaign organized in their communities by Federal Capital Territory Health and Human Service Secretariat alongside Federal Capital Territory MDG's office (using Health Insurance Agencies)8. The source of awareness of respondents in Auchi is also dissimilar from the study carried out in Ugu, South Africa where most knew of health insurance from health facilities. This disparity may therefore be due to the lack of health education and appropriate targeted awareness campaigns to educate the masses on Health Insurance schemes as well as the benefits.

Among respondents who were aware of health insurance, most respondents were assessed to have poor knowledge of health insurance as well as poor understanding of it, also dissimilar to the above study in Abuja8. Among socio-demographic characteristics of respondents, marital status was assessed a determinant of their knowledge as more married respondents had good knowledge of health insurance compared to singles (although both married and singles cumulatively had poor overall knowledge of health insurance). This is similar to the study done in 3 communities (Belabela, Edendale and Nelson Mandela Metropolitans) in South Africa in 2013, where only a quarter respondents had good knowledge of health insurance and less than a quarter respondents had good understanding.

Poor knowledge of respondents may be due to the lack of health education and the absence of tertiary health facility in the region which could have facilitated health education in the community; Health Insurance schemes and education at community level is also expected to be part of the responsibilities of functional primary health care in the community which is lacking.

Most respondents thought health insurance was beneficial and would recommend it for people and had a composite good attitude towards health insurance despite the overall poor knowledge. Level of knowledge and the assessed socio-demographic characteristics were not statistical determinants of the attitude of respondents towards health insurance. Level of attitude of respondents in this study is similar to a study carried out in Lagos where over three-fifth of the respondents had a positive attitude towards community-based health insurance.

A good attitude of respondents despite a relatively poor knowledge is a good indicator for health education and awareness of respondents to be readily accepted in the community, the high level of education of most respondents and most being in the young age group may be a major contributing factor to their good attitude towards health insurance.

Only very few respondents who knew of health insurance had an active health insurance scheme, among which over half belonged of private health insurance and most had their health insurance carried out on individual basis rather than group. A significant over two-fifth of respondents who belonged to health insurance schemes were undecided on whether they would

renew their premium to continue in their health insurance schemes.

This shows the likelihood of a further decline in the proportion of residents of Auchi community who will be involved in the health insurance in years to come, unless interventions such as health education, better hea;th insurance services and incentives are put in place.

More respondents who had good knowledge and good attitude towards health insurance were involved in an active health insurance scheme compared to those who had poor knowledge and poor attitude towards it; none of the socio-demographic characteristics was found a determinant of respondents' participation in active health insurance.

The proportion of respondents who were involved in health insurance is similar to the study done in Kabong Ward of Jos North LGA, Plateau State where only very (13.3%) of the total population were involved in any form of health insurance.

Predominant determinant of respondents' willingness to participate in health insurance schemes were level of awareness of health insurance and cost to partake in it vis-a-visthe low income of respondents.

This is similar to the study done in Ghana in 2017 which showed that the awareness level of respondents was a determinant of their willingness to participate in health insurance15 as well as the study carried out in Olowora community, Kosofe Local Government Area, Lagos where level of knowledge and the cost of participation were significant determining factors for respondents' willingness to participate in health insurance as a lot of respondents did not participate in health insurance due to insufficient funds.

V. CONCLUSION

Only about two-fifth of the respondents were aware of health insurance among which most had a poor knowledge of health insurance.

From the studies, married respondents had significantly better knowledge of health insurance compared to singles.

Most respondents however had a good attitude towards health insurance.

Only a few of the respondents who were aware of health insurance were actively participating in any scheme.

Predominant determinant of participation in health insurance were the level of awareness of respondents and the cost implication of participating in health insurance.

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