Uptake of Benue State Health Insurance Scheme among Informal Sector Workers in Makurdi

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Abstract

Introduction: The provision of affordable and accessible healthcare is a fundamental right that every citizen deserves regardless of their employment and educational status. One way to protect oneself financially from the high cost of receiving medical treatment is through health insurance. This study seeks to determine the perception, willingness to accept/enrol and uptake for Benue State Health Insurance Scheme among informal sector workers in Makurdi.

Method: The study was carried out in Makurdi among informal sector workers using a descriptive cross-sectional design. The study population consisted of informal sector workers living in Makurdi. A total of 369 participants were selected using multi-stage sampling technique and data was collected using an interviewer administered questionnaire. The data obtained from the research was examined and analysed using basic percentages and means. Comparative analysis of the study was done by subjecting the data obtained to chi-square analysis using statistical package for social sciences (SPSS), version 23. A P-value less than 0.05 were considered statistically significant.

Result: Findings from the study revealed a high willingness to enrol in Benue State Health Insurance Scheme (69.3%) but a low level of enrolment (34.0%) among informal sector workers. The mean willingness to pay amount was found to be 9,020.6 naira per annum as premium. Statistical analysis showed that there was a significant relationship between age, gender, marital status, monthly income, level of education and the willingness to enrol/enrolment in the scheme (p=0.00). The respondents generally had a good perception about BNSHIS as they believed; it will relieve them from making out-of-pocket payment for health care (30.7%), will protect from catastrophic health expenditure (27.9%), will make health care cheaper (39.0%), and will increase access to health services (30.7%). Those unwilling to enrol based their reasons around funds mismanagement (12.6%), alternative means of healthcare (12.6%), lack of regular income (16.2%), lack of trust in the system (24.3%) and non-belief in paying for sickness (13.5%). The less recurrent reasons were lack of interest (9.0%) and do not need health insurance (11.7%).

Conclusion: The uptake of Benue State Health Insurance Scheme among informal sector workers in the survey is considerably low. However, most informal sector workers have a good perception about the scheme and are willing to enrol in the scheme. The few who are not willing to enrol based their reasons around funds mismanagement, low income and lack of trust in the system.

Keywords: Health insurance, uptake, informal sector, enrolment.

Introduction

The provision of affordable and accessible healthcare is a fundamental right that every citizen deserves regardless of their employment and educational status. Due to high cost of using medical services, worldwide, 1.3 billion people live in underdeveloped nations without access to quality, reasonably priced healthcare[1, 2]. Long wait times, a lack of health facilities, a high cost of out-of-pocket care, and a shortage of medical personnel are further obstacles to accessing health care[3]. While most of developed countries have a prepayment scheme for health, the bulk of individuals who live in underdeveloped nations, particularly in Africa, pay for their own healthcare[4]. When compared to the developed world, this has made the burden of chronic illnesses, disabilities, and death greater and escalated, and has resulted in low productivity, short life expectancies, and poor development[4].

According to WHO[5], low-and-middle income countries bear approximately 90% of world's disease burden, yet only a little percent of global health spending occurs in these countries. Poor administration of public health services, inadequate funding for healthcare and the incapacity of public primary care services to meet the demands of the expanding population are all blamed for this predicament[6]. The challenges often encountered in out-of-pocket expenses have mandated the introduction of prepaid health insurance in many developing countries[7].

African leaders pledged in 2001 to take all necessary steps to guarantee that resources for healthcare are made available. They decided to provide healthcare improvement 15% of the yearly national budget. The focus of emphasis is now on universal health coverage as a workable way to increase healthcare affordability and accessibility on a global scale. Resolution WHA 58.33, which was passed by the 58th World Health Assembly in May 2005, urged member nations to make sure that their health finance systems contain mechanisms for financial contribution prepayment. These resolutions supported the shift to universal health coverage[8], believing that social health insurance programs would be an effective tactic for raising health-related funds, sharing risks, giving the underprivileged fair access to healthcare, and producing higher-quality healthcare[3].

One way to protect oneself financially from the high cost of receiving medical treatment is through health insurance. This is a fundamental component of health care for all. In Nigeria, the

implementation of National health insurance has been an essential step towards achieving this UHC.

In 2005, the National Health Insurance Scheme (NHIS) was created with the intention of 'securing universal coverage and access to adequate and affordable healthcare in order to improve the health status of Nigerians[9]. It pools funds from premium of enrolees and purchased health care through Health Management Organisations (HMOs) registered under the scheme. As of 2021, there were about 60 HMOs registered with the NHIS, 49 (77.6%) of which had nationwide presence[10]. In May 2022 the National Health Insurance Scheme was repealed by the National Health Insurance Authority (NHIA) Act. Despite the creation of the National Health Insurance Scheme (NHIS), most Nigerians are not covered by the scheme[11]. In 2019, it was reported that the scheme covered less than 5% of Nigerians with the enrolees being largely made up of Federal Government employees and their dependents[12]. A survey by the Lagos Bureau of Statistics revealed that only 11% of household members in the State had their healthcare costs covered by any form of health insurance. The NHIS decentralized the health insurance program's operation in order to close the coverage gap, and state governments were expected to replicate the program in their respective states. But as of 2019, the State-Based Health Insurance Scheme (SHIS) was only enacted by 18 states, with Lagos state being the first to do so in 2015[10]. State governments commit to dedicate a percentage of their consolidated revenue to the scheme to finance premiums for the poor and vulnerable in the state[12]. The decentralization of social health insurance to sub national levels was also an attempt to expand coverage to informal sector, seeing that the approximately 5% that were being covered by the NHIS were formal sector employees.

Insecure employment, poor and irregular income, and self-employment without social protection are the main characteristics of the informal sector. As a result, determining how much money informal sector employees make based on which social security contributions can be subtracted is challenging. Therefore, there are a lot of issues regarding the design of insurance schemes with regard to enrolment, revenue collection, risk pooling, and the purchase of health services that state governments must address if they want to introduce or expand the state social health insurance for the informal sector and to include the poor[13]. This study therefore seek to

determine the perception, willingness to accept/enrol and uptake for Benue State Health Insurance Scheme among informal sector workers in Makurdi.

Methods

Study Design and area

A descriptive cross-sectional study design was used for this study. The study was carried out among informal sector workers in Makurdi, Benue. Makurdi as the state capital city has an estimated population of 365,000 people and is one of the 23 local government areas of Benue. Makurdi is made up of 11 council wards comprising of both urban and rural dwellings. The major areas which make up its metropolis include; High level, Wurukum, Akpehe, Low level, Wadata, North bank, Kanshio, Gaadi, Agbadu, Fiidi, New GRA, Old GRA. The LGA also has 6 major markets including; Wurukum market, Highlevel market, Wadata market, Modern market, North bank market and international market. Makurdi is home to Benue state university, university of agriculture, Akawe Torkula Polytechnic, Nigeria Army School of Military Engineering, and also, River Benue. There are about 55 health facilities including a federal medical centre and general hospital that are registered with Benue state ministry of health. The people inhabiting the LGA are mostly Tiv, Idoma and Igede, but people of other ethnic groups like Igbo, Hausa and Yoruba also reside in the LGA. Majority are traders, farmers, civil servants, and artisans.

Study Population

The study population consisted of residents of Makurdi who have been living and working in the study area for at least six (6) months in the informal sector. This population basically includes all males and females of adult age (18years and above).

Inclusion and exclusion criteria

Adult male and female who resided in Makurdi, work in the informal sector and consented to the study were included in the study.

All males and females below the age of 18, adults who work in the formal sector and those who did not consent to the study were excluded.

Sample Size Determination

The minimum sample size was determined using Fisher's formula

$n = (z^2pq/d^2)$

Where n= the desired minimum sample size.

Z = the standard normal deviate, corresponding to 1.96 at 95% confidence interval.

P = Uptake of health insurance from previous studies (40.10% = 0.40)[1]

Q = Complementary probabilities [q = (1 - P) = 1 - 0.40 = 0.60)].

D = degree of accuracy desired (set at 0.05)

$$n = \frac{(1.96)^2 \times 0.40 \times 0.60}{(0.05)^2}$$

n = 368.8

Sample size = 369

Sampling Technique

The research sample was chosen using a multi-stage sampling procedure. From the sample frame of 11 wards in Makurdi LGA, 6 wards were chosen by simple random sampling. Simple random sampling (balloting) was used to choose ten streets from each of the wards. Finally, a systematic sampling method was used to select 369 informal workers. In the study, all six major marketplaces were covered.

Data Collection

Primary data was collected using an interviewer administered questionnaire with open-ended and closed-ended questions. The questionnaire was developed by the researcher after rigorous review of literatures. The questionnaire was pretested and necessary adjustments were made before the final exercise which took a period of two (2) weeks. The questionnaire designed consisted of five

sections. Section A contained information on the socio-demographic characteristics of respondents. Section B determined the perception of Benue State Health Insurance Scheme among the respondents. Section C determined willingness to accept (or enrol in the) Benue State Health Insurance Scheme among informal sector workers in Makurdi. Section D determined the level of enrolment of informal sector workers in the Scheme.

Ethical Consideration

Ethical clearance certificate was sought and obtained from the health research ethics committee of University of Nigeria Teaching Hospital, Enugu and permission to administer questionnaires to patients was obtained from the patients themselves using an informed consent form. The respondents were informed about the objective and purpose of the study, confidentiality was ensured and information was recorded anonymously.

Data Analysis

Completed questionnaires were collected from respondents and sorted out for ease of computation. The study's results were examined and analysed using basic percentages and means. Comparative analysis of the study was done by subjecting the data obtained to chi-square analysis using statistical package for social sciences (SPSS), version 23. A P-value less than 0.05 was considered statistically significant.

For Likert scale scoring, means above 3.0 were considered as high acceptability while means below 3.0 were considered as low acceptability. Mean scores were calculated for each variable and cumulative mean was calculated for each domain.

Results

Out of 369 questionnaires that were administered, 362 were fully completed and analysed, giving a response rate of 98.10%.

Table 1: Socio-demographic Characteristics of Respondents

Variables	Frequency	Percentage (%)
Gender		
Male	174	48.1
Female	188	51.9
Marital Status		
Single	127	35.1
Married	172	47.5
Divorced	39	10.8
Widowed	24	6.6
Age (years)		
Below 20	59	16.3
20-30	110	30.4
31-40	91	25.1
41-50	43	11.9
Above 50 years	59	16.3
Ethnicity		
Tiv	147	40.6
Idoma	95	26.2
Igede	59	16.3
Others	61	16.9
Level of Education		
No Formal Education	42	11.6
Primary Education	79	21.8
Secondary	109	30.1
Tertiary	132	36.5
Occupation		
Farmer	112	30.9
Trader	119	32.9
Artisan	51	14.1
Others	80	22.1
Monthly Income		
<50,000	121	33.4
50,000-100,000	179	49.4
101,000-150,000	45	12.4
Above 150,000	17	4.7
Total	**362**	**100.00**

Source: Field Survey, (2023)

Table 1 shows the demographic characteristics of respondents. Results from the study showed that a high number of the respondents were females (51.9% compared to males (48.1%). Higher frequency was observed for married participants (47.5%). This was followed by participants who were single (35.1%), divorced (10.8%) while the least frequency was observed for widowed

participants (6.6%). Majority of the participants (53.3%) were between the age ranges of 20-30 years. This was followed by those within the age range of 31-40, above 50 years, below 20 and 41-50 years (25.1%, 16.3%, 16.3% and 11.9% respectively). In terms of ethnicity, Tiv were the majority (40.6%), this was followed by Idoma (26.2%), people from other ethnic groups (16.9%) and traditional Igede (16.3%). Participants with tertiary education recorded higher percentages (36.5%). This was followed by those with secondary education (30.1%), primary education (21.8%) and those with no formal education (11.6%). Majority of the participants were traders (32.9%) while 30.9% were farmers, 22.2% were those with other occupations and 14.1% were artisans.

In terms of monthly income, majority of the participants were within the income bracket of fifty thousand naira (50,000) to one hundred thousand naira (100,000), this was followed by those with monthly income that is below fifty thousand naira (50,000), one hundred and one thousand naira to one hundred and fifty thousand naira monthly (12.4%) and those who were within the income bracket of above one hundred and fifty thousand naira monthly (4.7%).

Table 2: Awareness of BNSHIS

Variables	Frequency	Percentage (%)
Ever heard about Benue State Health Insurance Scheme		
Yes	137	37.8
No	225	62.2
Do you know how much the premium is		
Yes	93	25.7
No	269	74.3
Source of your information on Benue SHIS?		
Radio	30	21.9
TV	27	19.7
Newspaper	24	17.5
Employer	20	14.6
Family/Friend	36	26.3

Source: Field Survey, (2023)

The awareness of Benue State health insurance scheme among informal sector workers of Makurdi is presented in table 2. Results obtained revealed that 62.2% of the participants were not

aware of Benue State health insurance scheme while 37.8% of the participants were aware of the health insurance scheme. Majority of the participant's (26.3%) heard of Benue State health insurance scheme from family members and friends. This was followed by those who heard of the scheme on the radio (21.9%), television (19.7%), Newspaper (17.5%), employer (14.6%) and other sources (0.0%).

Majority (74.3%) of the participants did not know the insurance schemes' premium price while 25.7% knew the premium price of the health insurance scheme.

Table 3: Perception of Benue State Health Insurance Scheme among Informal Sector Workers in Makurdi

Perception of BNSHIS	**SD**	**D**	**U**	**A**	**SA**	$\bar{x}$ (SD)
The Scheme will relieve me of out-of-pocket payment	17(4.7)	40(11.0)	75(20.7)	119(32.9)	111(30.7)	3.73(1.1)
The Scheme will protect me and my family from high cost.	27(7.5)	81(22.4)	57(15.7)	96(26.5)	101(27.9)	3.45(1.3)
The Scheme will provide me a cheaper form of health care	28(7.7)	35(9.7)	80(22.1)	78(21.5)	141(39.0)	3.74(1.2)
The Scheme will enable me have better access to health services	17(4.7)	37(10.2)	76(21.0)	121(33.4)	111(30.7)	3.75(1.1)
I might be faced with an increased burden of medical bills, if I do not register under the Scheme.	14(3.9)	42(11.6)	53(14.6)	102(28.2)	151(41.7)	3.92(1.1)
The Scheme is a waste of money and time	36(9.9)	150(41.4)	94(26.0)	76(21.0)	6(1.7)	2.62(0.9)
If I enrol the funds will be mismanaged	19(5.2)	88(24.3)	81(22.4)	77(21.3)	97(26.8)	3.40(1.2)

Source: Field Survey, (2023)

The mean scores for perception of the Scheme among informal sector workers is presented in table 3. The results show that 32.9% and 30.7% of the respondents agreed and strongly agreed

that the Scheme will relieve them of OOP for health care, respectively, and the mean score was 3.73 (1.1). With respect to access to health services, 33.4% and 30.7% agreed and strongly agreed, respectively, that the Scheme will enable them to have better access to health services, and the mean score was 3.75 (1.1).

However, considerable proportions of the respondents agreed (21.3%) and strongly agreed (26.8%) that funds will be mismanaged in the Scheme, and the mean score was 3.40 (1.2).

Table 4: Willingness to Enrol and pay for BNSHIS among Informal Sector Workers in Makurdi.

Variables	Frequency	Percentage (%)
Willing to enrol in Benue State Health Insurance Scheme		
Yes	251	69.3
No	111	30.7
Reason for lack of willingness to enrol in BNSHIS		
I don't trust the system will work	27	24.3
Lack of regular income	18	16.2
I don't believe in paying for sickness	15	13.5
Afraid of funds mismanagement	14	12.6
I have other means of health care	14	12.6
I don't need health insurance	13	11.7
Not interested	10	9.0
Amount willing to pay annually		
Mean	9,020.6	
Standard deviation	3916.6	

Source: Field Survey, (2023)

The willingness to enrol and pay for Benue State Health Insurance Scheme is presented in table 4. Results obtained revealed that 69.3% of the participants were willing to accept or enrol in the BNSHIS while 30.7% were not willing enrol in the Benue State health insurance scheme. The mean Willingness to Pay (WTP) amount was found to be 9,020.6 naira. In terms of reasons for unwillingness to enroll in BNSHIS, majority (24.3%) stated that they don't trust the system will work. This was followed by those stated that lack of regular income (16.2%), don't believe in paying for sickness (13.5%), afraid of fund mismanagement (12.6%), have other means of

healthcare (12.6%), don't need health insurance (11.7%) and not interested (9.0%) are the reasons for their unwillingness to enroll in the Benue State health insurance scheme.

Table 5: Level of Enrollment of Informal Sector Workers in the BNSHIS Scheme

Variables	Frequency	Percentage (%)
Enrolled in Benue State Health Insurance Scheme		
Yes	123	34.0
No	239	66.0
Total	**362**	**100.0**

Source: Field Survey, (2023)

The level of enrolment of informal sector workers in the BNSHIS scheme is shown in table 5. Results obtained revealed that majority of the participant (66.0%) were not enrolled in the Benue State health insurance scheme, while 34.0% of the participants were enrolled in the scheme.

Table 6: Socio-demographic Factors Influencing Willingness to Enrol in the BNSHIS

Variables	Observations	Willingness to Enroll		χ^2	P-value
		Yes (%)	No (%)		
Gender					
Male	174	174 (100)	0 (0.0)	148.16	0.00
Female	188	77 (41.0)	111 (59.0)		
Marital Status					
Single	127	127 (100)	0 (0.0)	101.03	0.00
Married	172	79 (45.9)	93 (54.1)		
Divorced	39	29 (74.4)	10 (25.6)		
Widowed	24	16 (66.7)	8 (33.3)		
Age (years)					
Below 20	59	59 (100)	0 (0.0)	74.38	0.00
20-30	110	46 (41.8)	64 (58.2)		
31-40	91	75 (82.4)	16 (17.6)		
41-50	43	33 (76.7)	10 (23.3)		
Above 50 years	59	38 (64.4)	21 (35.6)		
Ethnicity					
Tiv	147	147 (100)	0 (0.0)	145.20	0.00
Idoma	95	26 (27.4)	69 (72.6)		
Igede	59	40 (67.8)	19 (32.2)		
Others	61	38 (62.3)	23 (37.7)		
Level of Education					
No Formal Education	42	27 (64.3)	15 (35.7)	45.49	0.00

Primary Education	79	79 (100)	0 (0.0)		
Secondary	109	63 (57.8)	46 (42.2)		
Tertiary	132	82 (62.1)	50 (35.7)		
Occupation					
Farmer	112	100 (89.3)	12 (10.7)	69.76	0.00
Trader	119	50 (42.0)	69 (58.0)		
Artisan	51	44 (86.3)	7 (13.7)		
Others	80	57 (71.2)	23 (28.8)		
Monthly Income					
<50,000	121	114 (94.2)	7 (5.8)	56.51	0.00
50,000-100,000	179	96 (53.6)	83 (46.4)		
101,000-150,000	45	29 (64.4)	16 (35.6)		
Above 150,000	17	12 (70.6)	5 (29.4)		

Source: Field Survey, (2023)

The socio demographic factors influencing willingness to accept or enrol in the Benue State Health Insurance Scheme is presented in table 6. Results obtained revealed that male participants showed the highest willingness (100.0%) to pay/enrol in health insurance, while females showed just 41.0%

All the single participants (100.0%) involved in the study were willing to enroll in the scheme, while their married counterpart showed less willingness (45.9%) to enroll in the scheme. The willingness to enrol/accept the scheme in relation to age revealed that all the participants (100.0%) below 20 years were willing to enrol in the scheme. In terms of ethnicity, all the Tiv participants showed the highest willingness (100.0%) while Idoma showed the least (27.4%). The willingness to enroll/accept the Benue State Health Insurance scheme in relation to level of education revealed that primary school participants were the highest (100%) while secondary were the least (57.8%) willing. For occupation, 89.3% of farmers were willing enroll/accept the health insurance scheme while 42.0% of traders were willing to enroll in the health insurance scheme, showing the least percentage. In terms of monthly income, 94.2% of those whose monthly income is less <50,000 were willing to enroll/accept the program while 53.6% of participants with monthly income bracket of 50,000 – 10,000 were willing to enroll in the scheme. Statistical analysis revealed a significant relationship between gender, marital status, age, ethnicity, level of education, occupation, monthly income and willingness to accept/enrol in the Benue State Health Insurance Scheme.

Table 7: Socio-demographic Factors Influencing Enrolment in the BNSHIS

Variables	Observations	Enrolled in the Scheme		χ^2	P-value
		Yes (%)	No (%)		
Gender					
Male	174	123 (70.7)	51 (29.3)	201.29	0.00
Female	188	0 (0.0)	188(100)		
Marital Status					
Single	127	93 (73.2)	34 (26.8	141.11	0.00
Married	172	16 (9.3)	156 (90.7)		
Divorced	39	12 (30.8)	27 (69.2)		
Widowed	24	2 (8.3)	22 (91.7)		
Age (years)					
Below 20	59	39 (66.1)	20 (33.9)	73.07	0.00
20-30	110	8 (7.3)	102 (92.7		
31-40	91	45 (49.5)	46 (50.5)		
41-50	43	15 (34.9)	28 (65.1)		
Above 50 years	59	16 (27.1)	43 (72.9)		
Ethnicity					
Tiv	147	110 (74.8)	37 (252)	187.19	0.00
Idoma	95	0 (0.0)	95 (100)		
Igede	59	5 (8.5)	54 (91.5)		
Others	61	8 (13.1)	53 (86.9)		
Level of Education					
No Formal Education	42	5 (11.9)	37 (88.1)	71.75	0.00
Primary Education	79	57 (72.2)	22 (27.8)		
Secondary	109	21 (19.3)	88 (80.7)		
Tertiary	132	40 (30.3)	92 (69.7)		
Occupation					
Farmer	112	50 (44.6	62 (55.4)	56.23	0.00
Trader	119	9 (7.6)	110 (92.4)		
Artisan	51	27 (52.9)	24 (47.1)		
Others	80	37 (46.2)	43 (53.8)		
Monthly Income					
<50,000	121	79 (65.3)	42 (34.7)	84.06	0.00
50,000-100,000	179	26 (14.5)	153 (85.5)		
101,000-150,000	45	14 (31.1)	31 (68.9)		
Above 150,000	17	4 (23.5)	13 (76.5)		

Source: Field Survey, (2023)

The socio demographic factors influencing enrolment in the Benue State Health Insurance Scheme is presented in table 7. Results obtained revealed that all the female participants

(100.0%) were enrolled in the scheme. Amongst the 174 male participants, 70.7% enrolled while 29.3% of them were not enrolled in the BNSHIS. Single participants showed the highest level of enrolment (73.2%) while widowed showed the least (8.3%). In terms of age, 66.1% of participants who were below 20 years enrolled in the scheme, and were the highest while 7.3% of participants who were within the age range of 20-30years were the least enrolled (7.3%). For ethnicity, Tiv participants showed the highest level of enrolment (74.8%) and Idoma least (0.00%). With regards to level of education, 11.9% of participants with no formal education were enrolled while 88.1% were not enrolled in the health insurance scheme. 72.2% of participants with primary education were enrolled while 27.8% of them were not enrolled in the health insurance scheme.

In terms of monthly income, 65.3% of those whose monthly income is less <50,000 showed the highest level of enrolment. Chi-square analysis revealed that there was a significant relationship between gender, marital status, age, ethnicity, level of education, occupation, monthly income and enrolment in the Benue State Health Insurance Scheme.

Discussion

This research examined the uptake of Benue State Health Insurance Scheme among informal sector workers in Makurdi. The perception about Benue SHIS is encouraging. Since the individual means are above the decision point of 3.0, it signifies that participants believe that the scheme will ease them of out-of-pocket payment, protect them and their families from high costs, provide them with cheaper form of health care, they can assess primary healthcare, maternal and children health, emergency care and selected specialized services and that it is not a waste of money and time. Other studies[28] also reported a good perception and a feeling of effectiveness of health insurance schemes on the health and wellbeing of participants, despite challenges. A study by Omotowo et al[25] also indicates a good perception (59.8%) of health insurance. This positive perception indicates that potential beneficiaries are interested in health insurance; hence a need to scale up the scheme at all levels.

However, participants have a negative perception about the scheme regarding the funds management. They believe that their funds will be mismanaged if they register for Benue state health insurance scheme. The result and findings are comparable to the findings of another study

conducted in Enugu metropolis[24] which showed that 54.1% of the respondents believe the government cannot be trusted to keep its end of the bargain with regards to NHIS.

This study shows that, majority of the respondents were willing to enrol in the Benue SHIS. This is similar to the findings of other studies[29, 25, 2, 60] which show high prevalence of willingness to enrol or pay for health insurance schemes. According to Ndung'u[3] and Adewole et al[9], despite the willingness to participate in health insurance, mainstream policies have not taken the informal sector into account and the majority of those working in the informal sector in low- to middle-income nations lack access to health insurance programs [3,9]. This perhaps explains the high willingness of the informal sectors workers in Makurdi to enrol in the BSHIS. This finding is a positive indicator that informal sector workers in Makurdi, Benue state are interest towards the state-based insurance schemes, therefore, policy makers and the government are encouraged to scale up resources and improved on the scheme to accommodate more beneficiaries.

Among the participants that were willing to enrol in the BSHIS, over half of them were willing to pay up to 9, 000 for the premium. This corresponds to the findings of the study Akwaowo et al[29] but lower than the amount reported in the study by Ishaq[59] which showed that participants were willing to pay as high as 2,626.9 monthly (31,522 naira per annum); as well as with Tabansi et al[2] where participants were willing to pay as high as much as 70,000 per annum. This however, may be because the participants in Tabansi et al[2] would rather enrol in a private based scheme.

For the few respondents that were not willing to enrol in the scheme, the reasons they gave are similar to the findings of Osaro et al[31] and Tabansi et al[2] which identified lack of interest, non-believe in paying for sickness, had other means of meeting their healthcare needs, poor quality of service, lack of interest, lack of regular income and were afraid of funds mismanagement as their reasons for not willing to pay for SHI. These findings therefore call for more transparency among government and all stake holders in management of funds pertaining to health insurance.

On the level of enrolment, this study shows that majority of the respondents were not enrolled in the Scheme. This corresponds with results of a research conducted in Ghana by Salari et al[61] which showed 40% coverage rate, and also similar to another study[2] carried out in Rivers state which showed that 63.0% of the respondents were not enrolled in any health insurance scheme. This low level of enrolment may be due to low level of awareness about the Benue SHIS as

findings in the study indicate a low level of awareness among the respondents. Ndung'u[3] also points out awareness as a determining factor for the level of enrolment in health insurance schemes. The study therefore, recommends that, to encourage potential members to enrol, it is necessary to raise awareness about the presence and health insurance's worth in comparison to other financial options for healthcare.

In terms of socio-demographic factors influencing, willingness to accept/enrol and enrolment in the Scheme among informal sector workers, the findings of this study shows that socio-demographic factors such as age, gender, marital status, level of income and educational level all influence how informal sector workers in Benue state enrol in the BNSHIS as well as their willingness to enrol. This agrees with the findings of Ngung'u[3] who conducted research on "factors influencing uptake of national health insurance in the informal sector in Kenya". Regarding gender, findings from the study further showed that the male participants were more willing (100%) to enrol in BNSHIS than female participants (41%). This however, contradicts with the findings of Ndung'u[3] which shows female were more willing to enrol in health insurance. Nevertheless, the study agrees with Sabine[40]. A satisfactory percentage of male participants were actually enrolled in the scheme. Higher awareness among male participants may be that male informal sector workers were more informed and aware of the BNSHIS as the source of information sharing about BNSHIS was more common on radio. Males are believed to listen to radio more than females. Because they are so important to community activities relating to immunization of children, reduction of infant mortality, reduction in infectious diseases, and access to hospital deliveries, enrolling females in insurance programs and BNSHIS is crucial. Awareness on the benefits should therefore be improved on to reach more females in the informal sector.

For marital status, participants who were single, widowed or divorced were more willing to enrol in BNSHIS as opposed to the married participants. This is contrary to the findings of Kirigia et al[42], were the researcher asserted that the necessity to safeguard the children and concern about excessive health spendings may be reasons for married people's increased demand. This is however, not the case in Benue state. The study therefore recommends more married informal sector workers should be made aware that they can assess primary healthcare, maternal and child health, emergency care and selected specialized services if they enrol in BNSHIS.

In terms of age, the research found that majority of the participants were in their 20s and younger participants were more willing to enrol and also had a greater percentage of enrolment among all the five age groups in the study. The trend was found to be decreasing with age. This is in close agreement with Aboyomi[37]. According to research by Aboyomi[37], aged farmers in Osun state were less likely to enrol in Nigeria's National Health Insurance Service (NHIS). The wives of older persons were more likely to have big families and be excluded from the health insurance program. In addition, many elderly people lack the means, training, and drive necessary to enroll in a health plan. The study however, disagrees with the findings of Adebiyi and Adeniji[36] and that of Ndung'u[3].

In terms of education, the findings of this study show that participants educational levels had a correlation with their willingness to enrol as well as enrolment in the BNSHIS, which clearly indicates that attaining some level of education has an influence on enrolment and willingness to enrol. This agrees with Mensah and Yeboah[22]. However, participants with primary level of education showed the highest level of willingness to enrol in the Benue SHIS. This is consistent with the findings of Ogundeji et al[32], who found that respondents with higher educational levels were less likely to be willing to pay for health insurance premiums in their study "to access the factors influencing willingness and ability to pay for SHI in Nigeria." The study offered several explanations for this peculiar propensity, suggesting that people with more education could be better equipped to assess their options. For instance, they could be able to analyze problems with service quality that could have an impact on the overall advantages of signing up for the program. Furthermore, the need for cutting-edge medical technologies and medications for non-communicable diseases is rising, and these needs are frequently not met by benefit packages. As a result, they might have difficulty trusting the system because they are afraid that the benefit bundles will not satisfy their health needs or that they will not get good value for their money[32]

On the level of income, the study discovered that participants with the lowest level of income showed the highest level of willingness to enrol in BNSHIS and also had the highest number of enrolment. The possible explanation to this unusual tendency could be that informal sector workers with lower income may see health insurance as a medium of preventing them from further spending on health once they have subscribed to a premium for one year.

Conclusion

The uptake of Benue State Health Insurance Scheme among informal sector workers is considerably low. While awareness about BSHIS is also low, most informal sector workers have a favourable perception about the scheme and therefore, showed good attitude towards enrolling in the scheme. The few who are not willing to enrol based their reasons around funds mismanagement, low income, lack of trust in the system. When these factors are successfully dealt with, then the uptake of Benue State Health Insurance Scheme among informal sector workers will greatly improve.

Health insurance is of utmost importance in any community. The burden of out-of-pocket health care costs, especially among most of the population who work in the informal sector, has led to severe health care system inequalities. Based on the findings, this study recommends the need to increase the level of awareness about health insurance among the informal sector. It also recommends that, the state government should consider subsidizing premiums for the impoverished or reassessing yearly premiums to ensure that it is within the financial reach of a larger proportion of workers in the informal sector.

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