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Correspondence to:

Kpun F. Hilda

Email: hilssy2015@gmail.com

ORCID: [0000-0003-4840-4103](https://orcid.org/0000-0003-4840-4103)

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Original Article

Assessing the Impact of the Bayelsa State Health Insurance Scheme in the Kolokuma/Opokuma LGA of Bayelsa State, Nigeria

Kpun F. Hilda^{1,2}, Alfred-Ugbenbo Deghinmotei², Okoronkwo A. Ngozi³, Amos O. Kuroghoekigha⁴, Adje U. David⁵

1 Pharmacist, Department of Pharmacology and Toxicology, Faculty of Pharmaceutical Sciences, Bayelsa Medical University, Yenagoa, Bayelsa State, Nigeria

2 Pharmacist, Department of Pharmaceutical and Medicinal Chemistry, Faculty of Pharmaceutical Sciences, Bayelsa Medical University, Yenagoa, Bayelsa State, Nigeria

3 Pharmacist, Department of Clinical Pharmacy and Pharmacy Administration, Abia State University, Uturu, Nigeria

4 Staff, Department of Medical Social Work, Faculty of Health Sciences, Bayelsa Medical University, Yenagoa, Bayelsa State, Nigeria

5 Associate Professor, Department of Clinical Pharmacy and Administration, Faculty of Pharmacy, Delta State University, Abraka, Nigeria

ABSTRACT

Background and Objectives: The Bayelsa Health Insurance Scheme (BHIS) is a state-designed social security plan in which enrollees benefit from a shared pool of cash based on premiums paid by participants. The study aimed to assess the self-reported effectiveness, service utilization, level of satisfaction, and barriers among beneficiaries, and proffer solutions to improve the scheme.

Methods: The study was a descriptive cross-sectional survey using a structured questionnaire. This questionnaire assesses the BHIS impact in Kolokuma/Opokuma LGA through six sections capturing demographics, service utilization, satisfaction, financial implications, access barriers, and improvement solutions using standardized scales and matrices, preceded by informed consent. Data was analyzed using SPSS and Microsoft Excel.

Results: The major barriers to service utilization were constant unavailability of claimed services at accredited facilities (90.1%) excessive waiting time (76.4%), late/non-referral to specialized centers (67.5), rigid BHIS protocols (63.1%), insufficient insurance coverage (55.2%), complex billing systems (50.7%), and shortage of BHIS staff (50.0%).

Conclusions: Possible solutions include the training and retraining of staff and service providers, providing subsidies for couples who are both government employees, initiating adequate supervision, monitoring, and feedback mechanisms, rapid referral protocols, and integrating and encouraging the establishment of health equity funds.

Key words: Patient satisfaction, health care costs, quality of health care, rural health services, vulnerable populations

INTRODUCTION

Health insurance, sometimes known as medical insurance, is a type of insurance that covers all or some of a person's medical expenses. As with other types of insurance, risk is shared by a large number of persons. The scheme is usually superintended by a

central institution, such as a government agency, commercial enterprise, or not-for-profit organization. [1]

Bayelsa is a state in Nigeria's South-South region, situated in the heart of the Niger Delta. It is one of the federation's newest states. [2,3] The state has eight local governments, [4] all of which are plagued by annual flooding; however, five are especially vulnerable. [5] Also, potentially carcinogenic soil pollution arising from the unlawful crude oil refining puts the populace at risk of a variety of ailments, including lung cancer, skin irritation, allergies, respiratory tract infections, and vision problems. [6,7] The situation is compounded by the poor state of primary health care infrastructure and personnel, resulting in the prevalence of communicable and noncommunicable diseases. Also, the state has a relatively high poverty index, with more than 60% of the population at risk of poverty, thereby limiting access to affordable and quality health care. [8,9]

The Bayelsa Health Insurance Scheme (BHIS) is a state government-designed social security plan with the mission to make medical care available to all residents in the state, irrespective of social and economic class, through fair and equitable financing of healthcare costs. [10] The BHIS services are provided at primary, secondary, and tertiary healthcare levels through a formal referral system. Benefits of the scheme include out-patient care, with necessary consumables, pharmaceutical care, diagnostic tests, consultation with specialists in the various fields of medicine, hospital care in a standard ward for a stay limited to a cumulative 30 days per year, eye examination, low-cost spectacles, dental care, a range of prosthesis, as well as promotional and preventative care such as immunization, health, and family planning education. [10] The study aims to assess the self-reported effectiveness of the State BHIS, the extent of out-of-pocket spending for healthcare services utilization before and after enrollment, the level of satisfaction of beneficiaries, barriers beneficiaries face when accessing BHIS, and offer solutions that will enhance the services of BHIS.

MATERIALS AND METHODS

Study design and setting

The study was a descriptive cross-sectional survey using a structured questionnaire to extract information from beneficiaries and a physical "on-the-spot" assessment of accredited health facilities under the BHIS. The research setting was the Kolokuma/Opokuma LGA of Bayelsa State, with headquarters in the town of Kaiama. It has an area of 361 km² with a population of 77,292 according to the 2006 census. [11] Bayelsa State is host to one of Nigeria's major crude oil and natural gas reserves, but despite its abundance of natural resources, the State receives very little benefits from its oil wealth due to structural disparities in the national revenue allotment system under the country's fiscal federalism. [4] The study was conducted between January 2023 and April 2025.

Study population

The study population consisted of all persons enrolled under the BHIS from Kolokuma/Opokuma Local Government Area

in Bayelsa State, Nigeria. The 2006 National Population Census of the local government area was used to estimate the study population. It is estimated that at least 3,000 persons are enrolled under the BHIS from the Kolokuma/Opokuma Local Government Area. All registered beneficiaries of the BHIS in Kolokuma/Opokuma LGA were included in the study.

Sample size determination and technique

Taro Yameni's population sample size formula was used to compute the sample size for the study. A sample size of 400 was obtained. A simple random sampling technique was applied to select registered BHIS beneficiaries from the Kolokuma/Opokuma LGA population frame, with 520 questionnaires distributed to account for an estimated 30% attrition/non-response rate.

Data collection instrument and sampling technique

A 78-item structured questionnaire was used in the study, including sections A to F. Response options included checklists, Likert scales, and open-ended fields. Section A captures socio-demographic and enrollment details, including gender, age, occupation, education, BHIS enrollment date, status, and current drug therapies. Section B evaluates utilization of 24 BHIS-covered services (e.g., outpatient care, pharmaceuticals, diagnostics, maternity services) and rates the overall scheme status in the LGA. Section C measures satisfaction levels across 12 BHIS services using a 4-point Likert scale. Section D assesses perceived impacts on healthcare utilization and out-of-pocket spending through five statements rated on a 5-point agreement scale. Section E identifies barriers to accessing BHIS services across 26 potential issues (e.g., service shortages, staff absenteeism, distance, stigma) via yes/no/unsure responses. Section F prioritizes 15 improvement solutions (e.g., staff training, subsidies for vulnerable groups, community advocacy, referral protocols) using a 5-point agreement scale and includes open-ended suggestions. The instrument features informed consent documentation, structured matrices for efficient data capture, and balances subjective perceptions with objective metrics, requiring under 20 minutes for completion. The questionnaire was designed as a Google Form and sent to the social media handles of enrollees, such as WhatsApp, Telegram, Facebook Messenger, etc. Also, a face-to-face mode was adopted for enrollees who were easily accessible. A convenience sampling technique was utilized.

Ethical considerations

Ethical approval was obtained from the Research and Ethics Committee, Ministry of Health, Bayelsa State, with approval number: BSHREC/Vol.1/24/02/13. Institutional approval was obtained from the BHIS head office. Consent to participate was obtained from enrollees who indicated a willingness to participate in the study by signing a written informed consent form.

Data analysis

Data obtained from the survey were analyzed using GraphPad InStat Version 27. Continuous data were expressed

as mean \pm SD, while categorical data were expressed as frequency and percentages. Pearson's Correlation analysis of BHS perceived barriers, service utilization, and level of satisfaction. BHIS service utilization was measured via beneficiaries' self-reported checklist responses confirming their use of covered services. BHIS satisfaction level captured beneficiary-rated experiences across services, while out-of-pocket spending reduction indicated perceived financial protection based on self-reported expenditure changes. Access barriers included documented obstacles like staff shortages or travel distance to facilities. Solution prioritization evaluated support for interventions such as subsidies for vulnerable groups or staff training. Finally, the BHIS status rating assessed the scheme's overall functionality within the local government area through beneficiary feedback.

RESULTS

Socio-demographic characteristics of respondents

A total of 520 questionnaires were distributed, but 406 were retrieved, giving a response rate of 78.1%. The modal age group was age 35 to 44 years, while the youngest age group was those between 18 and 25 years. More than one quarter, 33.5%, had four children. More than half, 56.2%, had a tertiary education, and 20.0% indicated they drink alcohol, while 11.6% were smokers (Table 1).

More participants were enrolled in the year 2019 (35%), while only 5.2% of respondents were enrolled in 2022. More than half of enrollees, 50.7%, were on antimalarial medications, while arthritis was the least common condition observed (13.8%). Out of 406 participants, a majority had active BHIS status (92.4%), while only 7.6% (31) were inactive (Figure 1).

Scope of coverage and level of satisfaction with BHIS services

The level of coverage for outpatient care, pharmaceutical care service, and preventive immunization was 63.3%, 50.7%, and 50.7%, respectively. Nearly half of the participants (47.4%) were dissatisfied with the services provided by BHIS, while 23.9% indicated a moderate level of satisfaction (Tables 2 and 3).

Level of satisfaction from BHIS

Barriers faced in accessing BHIS services

Constant unavailability of claimed services at accredited facilities was the highest barrier faced by enrollees (90.1%), followed by excessive waiting time at service centers (76.4%) and late/non-referral to specialized centers (67.5%; Table 4).

The extent of out-of-pocket spending for healthcare service utilization

More than half, 57.6 %, did not agree with the statement that enrolling in the BHIS reduced their level of out-of-pocket health expenditure, and 65.5 % stated that BHIS services

Table 1: Socio-demographic characteristics of respondents (N = 406).

Variable	Frequency (N)	Percentage (%)
Gender		
Male	233	57.4
Female	173	42.6
Age (years)		
18–24	22	5.4
25–34	50	12.3
35–44	126	31.0
45–54	119	29.3
55–64	89	21.9
Marital status		
Single	72	17.7
Married	245	60.3
Separated/divorced	89	21.9
Number of children		
None	0	0.0
One	78	19.2
Two	116	28.6
Three	76	18.7
Four	136	33.5
Occupation		
Civil servant	271	66.7
Private sector	78	19.2
Retired	57	14.0
Residence		
Kolokuma/Opokuma LGA	330	81.3
Yenagoa	76	18.7
Outside Bayelsa	0	0.0
Other LGA	0	0.0
Level of education		
None	0	0.0
Primary	30	7.4
Secondary	118	29.1
Tertiary	228	56.2
Msc	20	4.9
PhD	10	2.5
Social history		
Smoker	47	11.6
Alcohol use	81	20.0
Others	278	68.5

had not in any way improved their level of healthcare service utilization (Table 5).

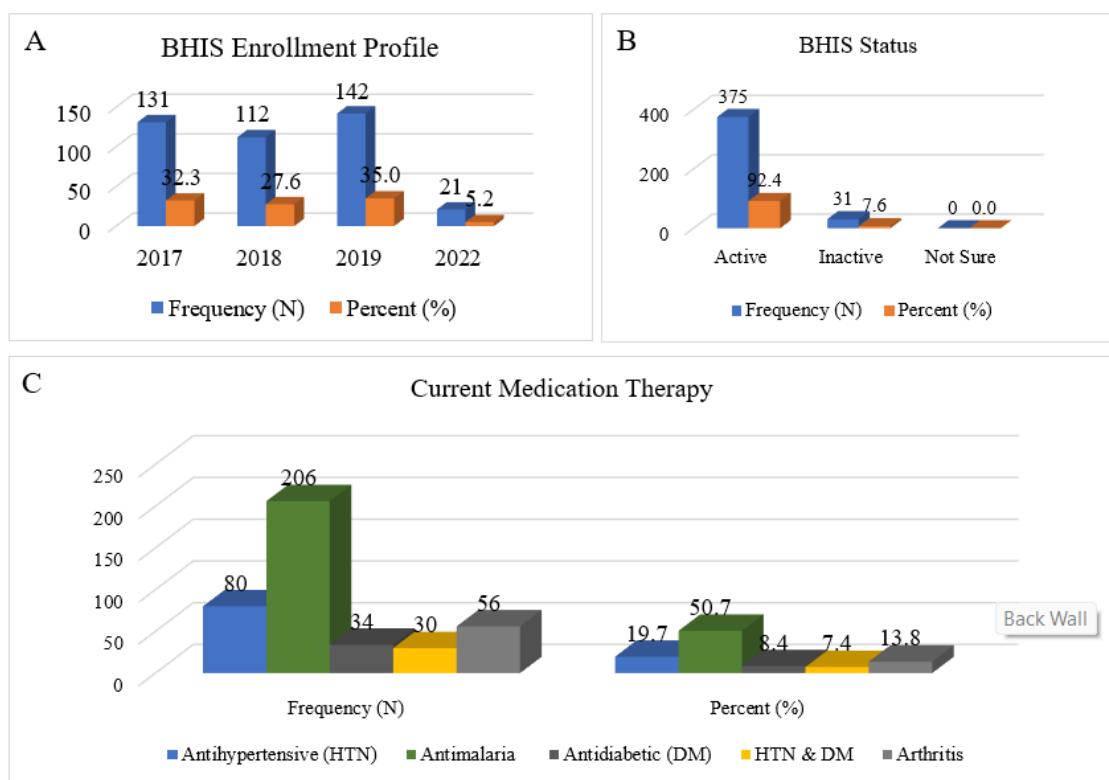


Figure 1: Demographic characteristics. (A) Date/year of BHIS enrollment. (B) The BHIS's current status. (C) Current drug therapy of participants.

Table 2: Current state of BHIS in Kolokuma/Opokuma LGA (N = 406).

Variables	Yes		No		Not sure	
	N	%	N	%	N	%
Current services provided by BHIS						
Outpatient care, including covered consumables	257	63.3	119	29.3	30	7.4
Pharmaceutical care (BHIS Drug List)	206	50.7	118	29.1	82	20.2
Diagnostic tests (BHIS Diagnostic Tests List)	157	38.7	169	41.6	80	19.7
Maternity tests for pregnancy	133	32.8	141	34.7	132	32.5
Post-natal for 12 weeks (after delivery)	26	6.4	141	34.7	239	58.9
Preterm (premature) baby care for the post-natal period of 12 weeks	0	0.0	258	63.5	148	36.5
Consultation with specialists in the various fields of medicine	46	11.3	284	70.0	76	18.7
Hospital care in standard wards for 30 days (in one year)	0	0.0	284	70.0	122	30.0
Eye examination and care, and provision of low-priced glasses	30	7.4	247	60.8	129	31.8
Dental care (excluding those on the exclusion list)	24	5.9	231	56.9	151	37.2
A range of prostheses (produced in Nigeria)	30	7.4	225	55.4	151	37.2
Preventive care (immunization, health, and family planning education)	206	50.7	143	35.2	57	14.0

Possible solutions to the BHIS challenges

The solutions proposed by enrollees include training and retraining of service providers, provision of subsidies

for couples if both are employed by the government, providing subsidies for indigent patients, and rapid referral protocols, 81.3%, 79.8%, 79.6%, 64.5%, respectively (Table 6).

Table 3: Level of BHIS satisfaction (N = 406).

Variables	Highly satisfied		Moderately satisfied		Neutral		Not satisfied	
Level of Satisfaction with BHIS Services	N	(%)	N	(%)	N	(%)	N	(%)
Outpatient care, including necessary consumables	0	0.0	183	45.1	134	33.0	89	21.9
Pharmaceutical care services	0	0.0	205	50.5	82	20.2	119	29.3
Diagnostic tests	24	5.9	60	14.8	88	21.7	234	57.6
Maternity tests for pregnancy	30	7.4	66	16.3	134	33.0	176	43.3
Post-natal for 12 weeks (after delivery)	26	6.4	52	12.8	130	32.0	198	48.8
Preterm (premature) baby care for the post-natal period of 12 weeks	0	0.0	72	17.7	30	7.4	304	74.9
Consultation with specialists in the various fields of medicine	24	5.9	78	19.2	89	21.9	215	53.0
Hospital care in standard wards for 30 days (in a year)	0	0.0	78	19.2	113	27.8	215	53.0
Eye examination and care, and provision of low-priced glasses	0	0.0	82	20.2	110	27.1	214	52.7
Dental care (excluding those on the exclusion list)	0	0.0	76	18.7	86	21.2	244	60.1
A range of prostheses (produced in Nigeria)	0	0.0	54	13.3	163	40.1	189	46.6
Preventive care (immunization, health, and family planning education)	48	11.8	159	39.2	88	21.7	111	27.3
Total (% = n/406 × 100)	152	37.4	1165	286.9	1247	307.1	2308	568.5
Mean (%) ± SD	3.1±4.0		23.9±12.5		25.6±8.1		47.4±14.5	

More than half of the respondents (54.2%) indicated that the current state of the BHIS services at the Kolokuma/Opokuma LGA requires urgent intervention by the state government (**Figure 2**).

The Pearson correlation analysis of the perceived barriers, healthcare utilization, and level of service satisfaction of BHIS among the participants (**Table 7**).

DISCUSSION

Demographics

Both qualitative and quantitative methods were used to assess the effectiveness of the BHIS. The modal age group was 33 to 44 years. This is similar to the age distribution observed in a study carried out by Akinyemi et al. [12], where the predominant age group was between 31 and 40 years of age.

More than half of the participants were married. A similar predominance of married enrollees was observed in studies conducted in Nigeria [13] and Ghana. [14] The level of participation in the scheme is comparatively low but varied from year to year, with a peak in 2017. This agrees with the observation that in developing countries, health insurance enrollment rates are quite low. [15,16] Lengthy registration process, a lack of funds, a low level of knowledge, and the availability of alternative sources of treatment were some reasons cited by respondents for non-utilization in the scheme. Among other factors, participants' perception and

affordability have also been identified by other workers as barriers to involvement in health insurance. [17–19]

Current state, level of satisfaction, and healthcare utilization

A majority of the participants believed that the current state of the BHIS services was deplorable and there was a need for government intervention to put it back on track. Only 35.0% agreed that BHIS services have improved their level of healthcare service utilization. This is in contrast with a meta-analysis of studies conducted in sub-Saharan Africa, which showed that 61.84% of beneficiaries were satisfied with their health insurance (95% CI, 55.14–68.55).

Availability of prescribed drugs and laboratory services is significantly associated with higher levels of patient satisfaction. [20] The level of satisfaction is very low in our study, which is understandable since these crucial indices are lacking, and most centers in the study area witnessed constant nonavailability of claimed benefits. Overall, only 4.0% and 12.5% were highly and moderately satisfied with the services provided by the scheme. This is consistent with a recent survey in which beneficiaries of the NHIS were fairly satisfied with the scheme. They considered it an improvement to being uninsured, but believe that the plan can be significantly improved. [21]

Perceived barriers faced by BHIS enrollees

Constant unavailability of claimed services, excessive waiting time, late/non-referral to specialized centers, rigid

Table 4: Perceived barriers to accessing BHIS services.

Variables	Yes+		No		Not sure	
	N	%	N	%	N	%
Perceived barriers						
Insufficient insurance coverage for all medical needs	224	55.2	100	24.6	82	20.2
Constant unavailability of claimed services at accredited facilities	366	90.1	40	9.9	0	0.0
Shortage of BHIS staff	203	50.0	145	35.7	58	14.3
Poor patient-provider communication by the BHIS staff	141	34.7	183	45.1	82	20.2
Poor patient-provider communication by the BHIS service center	141	34.7	213	52.5	52	12.8
Untrained BHIS staff	52	12.8	46	11.3	406	100.0
Staff constant absenteeism	140	34.5	136	33.5	130	32.0
Excessive waiting time at the BHIS service centers	310	76.4	96	23.6	0	0.0
Lack of awareness of all BHIS services	106	26.1	0	0.0	300	73.9
Lack of a holistic therapeutic approach	112	27.6	294	72.4	0	0.0
Limited consultation time	238	58.6	60	14.8	108	26.6
Too rigid BHIS protocols	256	63.1	18	4.4	132	32.5
Stigma/fear of discrimination and bias among beneficiaries	0	0.0	137	33.7	269	66.3
Stigma/fear of discrimination and bias among BHIS staff	0	0.0	131	32.3	275	67.7
Transportation/Distance to the BHIS service centers from home	86	21.2	233	57.4	87	21.4
Transportation/Distance to the BHIS service centers from the workplace	0	0.0	406	100.0	0	0.0
Language barrier	0	0.0	406	100.0	0	0.0
Religious believes	0	0.0	406	100.0	0	0.0
Preferential gender-based treatment	0	0.0	278	68.5	128	31.5
Complex billing systems in the BHIS service centers	206	50.7	102	25.1	98	24.1
Late/non-referral to specialized centers	274	67.5	48	11.8	84	20.7

+ Percentages do not add up to 100 due to multiple responses.

Table 5: The extent of out-of-pocket and the level of healthcare service utilization (N = 406).

Variables	SA		A		N		D		SD	
	N	%	N	%	N	%	N	%	N	%
Healthcare service utilization										
BHIS services have improved my level of healthcare service utilization	22	5.4	120	29.6	0	0	264	65.0	0	0
There is a poor level of awareness of BHIS services in the Kolokuma/Opokuma LGA	30	7.4	142	35.0	0	0	234	57.6	0	0
I spend less money from my pocket to pay for healthcare services	0	0.0	172	42.4	0	0	234	57.6	0	0
There is no difference in my payment for healthcare services, even under the BHIS program	0	0.0	117	28.8	0	0	289	71.2	0	0
Overall, I spend more money on healthcare services under the BHIS program	30	7.4	174	42.9	0	0	202	49.8	0	0
Total (% = n/406 × 100)	82	20.2	725	178.6	0	0	1223	301.2	0	0
Mean		4.0		35.7		0		60.2		0
SD		3.4		6.0		0.0		7.3		0.0

SD: strongly agree; A: agree; N: neutral; D: disagree; SD: strongly disagree.

Table 6: Possible solutions to perceived challenges.

Variables	SD		A		N		D		SD	
	N	%	N	%	N	%	N	%	N	%
Possible solutions										
Community loan funds to pay for transport	0	0.0	0	0.0	70	17.2	336	82.8	0	0
Advocacy and counseling on consumer information regarding BHIS services	48	11.8	189	46.6	87	21.4	82	20.2	0	0
Advocacy for community participation and intervention	78	19.2	141	34.7	46	11.3	141	34.7	0	0
Social marketing of BHIS services	78	19.2	113	27.8	126	31.0	89	21.9	0	0
Broaden the coverage based on the pandemic/endemic diseases in the area	107	26.4	182	44.8	58	14.3	59	14.5	0	0
Health equity fund and reduce the amount deducted from beneficiaries	205	50.5	142	35.0	0	0.0	59	14.5	0	0
Subsidies for the poor	323	79.6	83	20.4	0	0.0	0	0.0	0	0
Integrate outreach services	213	52.5	163	40.1	30	7.4	0	0.0	0	0
Emergency transport with a communication system	95	23.4	295	72.7	16	3.9	0	0.0	0	0
Religious and cultural sensitization on healthcare delivery	85	20.9	180	44.3	111	27.3	30	7.4	0	0
Initiate adequate supervision, monitoring, and feedback mechanisms	300	73.9	46	11.3	60	14.8	0	0.0	0	0
Training and retraining of staff and service providers	330	81.3	54	13.3	22	5.4	0	0.0	0	0
Provide subsidies for couples who are both government employees, since the same amount is deducted from them	324	79.8	82	20.2	0	0.0	0	0.0	0	0
Rapid referral protocols are available at all service centers	262	64.5	144	35.5	0	0.0	0	0.0	0	0
Total (%) $n/406 \times 100$	2186	538.4	1814.0	411.3	626.0	154.2	796.0	196.1	0.0	0.0
Mean		43.1		31.9		11.0		14.0		0.0
SD		27.8		17.7		10.1		21.8		0.0

BHIS protocols, limited consultation time, and insufficient insurance coverage for all medical needs were some of the perceived barriers faced by BHIS enrollees in trying to access the services in designated health facilities.. A similar spectrum of challenges was noted in an Italian study. [22]

Possible solutions to the challenges faced with the BHIS services

Possible solutions suggested by participants included training and retraining of staff and service providers, provision of subsidies for couples who are both government employees, rapid referral protocols for all service centers, and integration of outreach services into the health insurance scheme. These suggestions are similar to those proposed in previous studies; shorter waiting times and a more comprehensive research exploring factors enhancing better patient satisfaction were essential in improving the overall satisfaction with the scheme. [21]

Others have suggested state subsidisation of healthcare costs and public enlightenment, emphasizing perceived benefits of the scheme as well as easing access and enrollment protocols.

[23] Also, motivating and retaining healthcare workers, adopting appropriate technology, and clarifying prepayment mechanisms have been proposed as possible solutions. [24] Adopting and implementing policies that will enhance the health literacy of potential beneficiaries of the scheme has also been suggested. [25]

The perceived barriers with the highest number of responses (positive and negative) were pooled together, and a correlational analysis was performed. The Pearson correlation (r) showed -0.595 , indicating an insignificant association. A Pearson correlation (r) value of 0.10 indicates a small association, 0.30 indicates a medium association, and 0.50 indicates a large or significant association. The same association was observed between the healthcare service utilization and level of satisfaction from BHIS services, with Pearson correlation (r) values of -1.000 and -0.829 , respectively. This indicates a low statistical correlation among the responses obtained (**Table 7**).

The study was able to assess the impacts of the BHIS in the Kolokuma/Opokuma LGA of Bayelsa State, and vital measures

Table 7: Association among perceived barriers, level of satisfaction, and service utilization.

Variables	Participants (N)		Pearsons correlation
	Yes	No	
Perceived barriers (major barriers)			-0.595
Insufficient insurance coverage for all medical needs	224	100	
Constant unavailability of claimed services at accredited facilities	366	40	
Shortage of BHIS staff	203	145	
Poor patient-provider communication by the BHIS staff	141	183	
Poor patient-provider communication by the BHIS service center	141	213	
Untrained BHIS staff	52	46	
Staff constant absenteeism	140	136	
Excessive waiting time at the BHIS service centers	310	96	
Lack of a holistic therapeutic approach	112	294	
Limited consultation time	238	60	
Too rigid BHIS protocols	256	18	
Transportation/Distance to BHIS service centers from home	86	233	
Complex billing systems in the BHIS service centers	206	102	
Late/non-referral to specialized centers	274	48	
Healthcare service utilization	Agree	Disagree	
BHIS services have improved my level of healthcare service utilization	142	264	-1.000
There is a poor level of awareness of BHIS services in the Kolokuma/Opokuma LGA	172	234	
I spend less money from my pocket to pay for healthcare services	172	234	
There is no difference in my payment for healthcare services, even under the BHIS program	117	289	
Overall, I spend more money on healthcare services under the BHIS program	204	202	
Level of Satisfaction with BHIS Services	Satisfied	Not satisfied	
Outpatient care, including necessary consumables	183	89	-0.829
Pharmaceutical care services	205	119	
Diagnostic Tests	84	234	
Maternity Tests for Pregnancy	96	176	
Post-natal for 12 weeks (after delivery)	78	198	
Preterm (premature) baby care for the post-natal period of 12 weeks	72	304	
Consultation with specialists in the various fields of medicine	102	215	
Hospital care in standard wards for 30 days (in a year)	78	215	
Eye examination, care, and provision of low-priced glasses	82	214	
Dental care (excluding those on the exclusion list)	76	244	
A range of prostheses (produced in Nigeria)	54	189	
Preventive care (immunization, health, and family planning education)	207	111	

on how to mitigate the challenges faced by enrollees were suggested, but these findings are limited to only one LGA out of 8 LGAs in Bayelsa State. Another limitation of the study is possible social desirability bias in self-reported services or responses, and the cross-sectional design to contextualize the findings. Therefore, further studies should be conducted with wider LGA or inter-state coverage to validate the outcomes of the study for onward policy-making decisions.

CONCLUSIONS

Enrollees of the BHIS at the Kolokuma/Opokuma LGA were dissatisfied with the services due to barriers faced including constant unavailability of claimed services at accredited facilities, excessive waiting time, late/non-referral to specialized centers, rigid protocols, limited consultation time, insufficient insurance coverage for all medical needs, complex

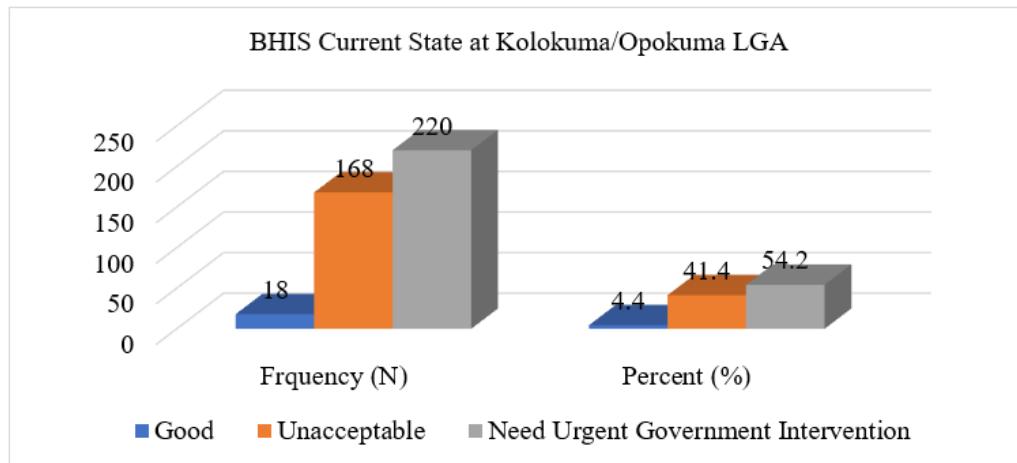


Figure 2: Current state of BHIS in Kolokuma/Opokuma LGA.

billing systems, shortage of staff, poor patient-provider relationship, staff constant absenteeism, lack of holistic therapeutic approach, distance to service centers from home, and untrained staff. These barriers could be overcome by training and retraining service providers, providing subsidies for couples who are both government employees initiating adequate monitoring and feedback mechanisms, rapid referral protocols for all service centers, health equity fund establishment and avoidance of complex billing, advocacy, and counseling on consumer information, advocacy on community participation and intervention, social marketing of services, broaden the coverage based endemic diseases, and religious and cultural sensitization on healthcare delivery. Based on the findings, the government should enhance the BHIS by training staff and improving supervision of service centers. Also, advocacy and community engagement on consumer information and participation, cultural and religious sensitization, broadening disease coverage, and conducting further multi-LGA studies across Bayelsa State are recommended to strengthen the scheme.

AUTHORS' CONTRIBUTION

Each author has made a substantial contribution to the present work in one or more areas, including conception, study design, conduct, data collection, analysis, and interpretation. All authors have given final approval of the version to be published, agreed on the journal to which the article has been submitted, and agree to be accountable for all aspects of the work.

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