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Original Research Article

Effects of utilization of basic health care provision fund on service delivery in primary health centres in Osun State

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ABSTRACT

Background: One of the daunting challenges militating against the provision of quality healthcare services at the various primary health centres hindering the successive provision of sustainable and equitable PHC services. This study aimed to assess the effects of the utilization of the basic health care provision funds on service delivery in primary health centres in Osun State.
Methods: A descriptive cross-sectional study was adopted for this study among 384 respondents selected using multistage sampling methods from different LGAs in Osun State between June 2023 and February 2023. The research instrument was a semi-structured questionnaire analysed with SPSS version 25.0. Univariate and bivariate analysis were done as appropriate and a p value of <0.05 was taken as statistically significant.
Results: The study found that the majority (93.2%) of BHCPF-supported PHCs received monthly releases. Most patients (98.2%) were satisfied with service delivery, which influenced patient utilization of PHC facilities, albeit without statistical significance.
Conclusions: Most (90%) of the facilities provided most services in the component of PHCs, but less than one-third offered mental and dental health services. Implementing these services in BHCPF-supported PHCs is recommended.

Keywords: BPHCF, Effect, PHC, Satisfaction, Utilisation

INTRODUCTION

Health has been described as a fundamental human right, and the attainment of the highest possible level of health by all people should be the responsibility of various national and sub-national governments.[1] The continually widened disparities in the health status of the people, especially between developed and developing countries and even among the people of the same country have always been an issue of serious public health concern.[2]

Since the domestication of PHC in Nigeria, inadequate funding of its various laudable programmes remains one of the daunting challenges militating against the provision of quality healthcare services at the various primary health centres located in different parts of the country, and this has hindered the ability of the successive governments to provide sustainable and equitable PHC for all the citizens and residents of the country.[3]

Financing of healthcare in Nigeria has been through funding from the government via its yearly budgetary allocations, donor funding from donor agencies both nationally and internationally, private funding and National Insurance Health Scheme (NHIS). The Nigeria constitution of 1999 gives the federal, state and local governments the authority under the law to cater for the health of the people within their domains.[4] Despite this responsibility as enshrined in the constitution, a lot of challenges are being faced concerning accessing care by

the citizens because of healthcare financing. These are but are not limited to, poor funding by the government, high out-of-pocket payment, inadequate implementation of the financing policies and corruption.[5]

The current predicaments in health indices in the sub-Saharan African countries and indeed Nigeria have been attributed to inequality in access and inappropriate healthcare financing, the aftermath of which Nigeria is ranked 4th country in the whole world with the worst health system despite her rich human and natural resources.[4,6] About thirty-four per cent of global maternal deaths occur in Nigeria and India alone.[7,8] The current infant mortality rate (IMR) (2022) in Nigeria is documented at 56.8 per 1000 live births.[9] The average life expectancy in 2022 in Nigeria for men and women is 60 years and 63 years respectively, it is among the lowest in the African continent.[9] These indices are the reflections of the shortfalls emanating from the debilitating healthcare quality in Nigeria resulting from poor healthcare financing among other factors.

According to World Health Organization, improving healthcare financing, healthcare accessibility, availability, affordability and the overall quality of care in Nigerian healthcare facilities especially at the PHC level will go a long way in improving the major healthcare indicators (Infant mortality rate, Under-five mortality rate, and maternal mortality ratio).[8]

In 2014, the National Health Act was enacted in Nigeria and a very important constituent of the act is the basic health care provision fund (BHCPF), which was targeted at the expansion of the delivery of quality PHC services to all Nigerians especially the poor and vulnerable through the provision of adequate financial backing for the smooth running of the PHC services and programmes all over the country.[10-12]

The BHCPF is funded through an annual grant from the federal government constituting at least one per cent of the consolidated revenue fund (total federal revenue before it is shared with all tiers of government); grants by international donors; and funds generated from innovative sources such as taxes on cigarettes and alcohol.[13] In addition, the states and local government areas are also meant to contribute twenty-five per cent of matching funding each towards PHC projects in their domain.[13]

Three gateways are implementing the BHCPF, fifty per cent of the BHCPF is set aside for the supply of a basic package of services in PHC facilities through the National Health Insurance Scheme; forty-five per cent is meant to be expended by the National Primary Health Care Development Agency on procurement of essential drugs, maintenance of the PHC facilities, purchase of equipment and transportation, as well as strengthening human resource capacity; and the remaining five per cent is earmarked for response to health emergencies and epidemics by the Federal Ministry of Health.[14]

The Osun State government, having satisfied all the requirements for accessing the BHCPF in 2017, started its implementation in 2018 with the piloting of the BHCPF in 10 LGAS for 3 months while the full implementation commenced in December 2019 with the disbursement of funds to one focal primary health centre per ward (a total of 332 primary health centres in its 30 local government areas) as a means of providing a basic minimum package of health care services to the people of Osun State purposely to actualise improved health care coverage for all the residents of the state.[15] Since the implementation of the BHCPF in the nation, no study has been conducted to determine the effects of the utilisation of the funds on service delivery in PHCs in Osun State, and this necessitates the conduct of this study.

METHODS

This study was a cross-sectional conducted among health workers and patients in the basic health care provision fund-supported facilities in Osun State between June 2022 and February 2023. Osun State has 776 functional PHCs out of which three hundred and thirty-two (332) are the ward focal facilities that receive quarterly support from the basic healthcare provision fund. Multistage sampling was employed. There are three senatorial districts and each of them has 10 local government areas, three LGAs were selected randomly in each senatorial district and five BHCPF facilities were selected from the selected LGAs through simple random sampling employing the balloting method. From the selected PHCs, respondents were selected using the proportionate allocation of respondents based on number of staff per facility (average monthly client flow per clinic X sample size/summation of monthly client flow in the selected hospital).

Health workers who have been working in the BHCPF facilities for at least one year and patients who access healthcare in the BHCPF-supported facilities were included in this study. Sample size for the study was calculated using the Leslie Fischer's formula [$n= (Z^2pq)/d^2$)], estimation was done using 50% prevalence as there have not been any study conducted, 5% precision level, 5% level of significance and 95% confidence interval was used, the estimate sample size was 384.

Data collection and management

A self-administered pre-tested questionnaire was used to obtain data from the participating healthcare workers while that of the patients was a combination of both interviewer and self-administered questionnaire. Information collected included socio-demographic characteristics of the respondents, frequency of release of basic health care provision funds to PHC facilities, utilization of services provided by BHCPF-supported PHCs by patients, Pattern of the utilization of basic health care provision funds by healthcare workers in BHCPF facilities, the satisfaction of patients with service delivery

in PHC facilities. Section B has questions on the frequency of release of BHCPF and utilization of services provided by the PHCs, section C has 12 questions on the pattern of utilization of BHCPF by managements of PHCs and section D contained 14 questions on the satisfaction of patients with service delivery

Data analysis

All data were analysed using IBM SPSS version 25.0 software. Results were presented in tabular forms and a test of significance such as chi-square was done with differences significant at p less than 0.05, frequencies and percentages will be used to summarize the categorical variables and mean for the quantitative variables like age, knowledge score etc. Chi-square was used to determine the association between the utilization of basic health care provision funds and the level of satisfaction with service delivery by patients.

Ethical considerations

Approval for the conduct of the study was obtained from the institutional review board Adeleke University Ede and the State Primary Health Care Board, Ministry of Health Osun State, Nigeria, and informed consent was obtained from the respondents after adequate information on the study has been provided.

RESULTS

The Table 1 shows the socio-demographic characteristics of the respondents. The mean age of the patient respondents was 36.61±10.3, while the management respondents were 43.48±7.1. The majority 58.4% of the respondent patients were within the 17-39 age group and the commonest (69.9%) age among the management was the 40-59 age group.

Table 1: Socio-demographic characteristics of the respondents (n=384).

Variables	Sub-variables	Patient (n=281)		Management (n=103)	
		Frequency	Percentage	Frequency	Percentage
Age (years)	17-39	164	58.4	31	30.1
	40-59	110	39.1	72	69.9
	60 and above	7	2.5		
Sex	Male	63	22.4	40	38.8
	Female	218	77.6	63	61.2
Level of education	SSCE	43	15.3	2	1.9
	OND	111	39.5	20	19.5
	HND/BSC	87	31.0	67	65.0
	Masters	11	3.9	5	4.9
	PhD	2	0.7	0	0.0
	Primary	8	2.8	0	0
	Others	19	6.8	9	8.7
Marital status	Single	69	24.6	9	8.7
	Married	200	71.2	87	84.5
	Separated/divorced	9	3.2	3	2.9
	Widowed	3	1.0	4	3.9

There were more females among the respondents, 77.6% and 61.2% for patients and management respectively. While more (39.5%) of the patient respondents have ordinary national diploma (OND) as their highest educational attainment, more (65.0%) of the management have HND/BSC as their highest level of education. Most respondents were married 71.2% and 84.5% for both patients and management respectively (Table 1).

Figure 1 shows the frequency of release of basic health care provision funds to primary health care facilities. The majority (71.8%) of the management received the basic healthcare provision fund for their facilities every month while only 28.2% received the fund quarterly (Figure 1).

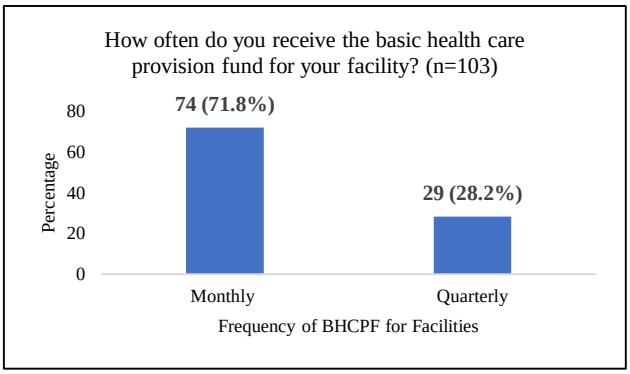

Figure 1: Frequency of release of basic health care provision funds to PHC facilities (n=103).

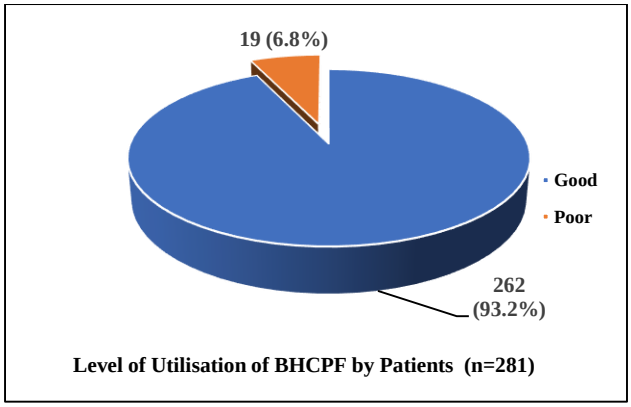

Figure 2: Level of utilization of services provided by BHCPF-supported PHCs by patients.

Figure 2 shows the level of utilization of BHCPF supported by PHCs by the patients. The majority (93.2%) were found to have good utilization compared to only 6.8% of patients who have poor utilization of BHCPF (Figure 2).

In Figure 3, reasons for the non-utilization of BHCPF supported by PHCs were shown. 21.0% said their non-utilization was a result of the high cost of care at the facilities, more (30.2%) of the respondents have other reasons apart from inadequate personnel (25.6%), poor road network (15.3%) and bad attitude of the health care workers (7.8%) (Figure 3).

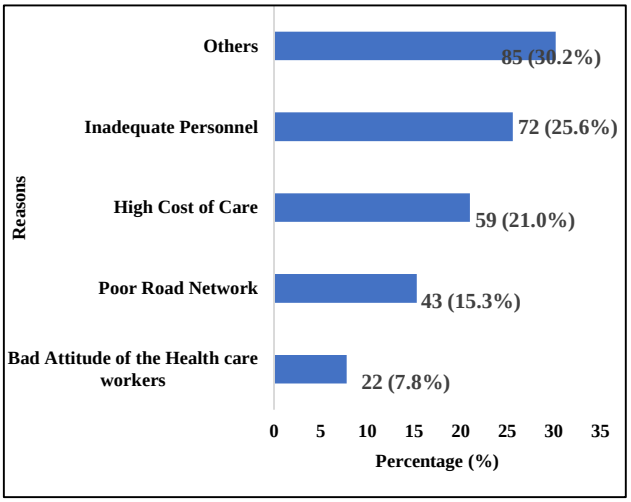

Figure 3: Reasons for non-utilization of PHC by patients (n=281).

Table 2: Pattern of utilization of basic health care provision funds by management of primary healthcare facilities in Osun State (n=103).

Variables	Sub-variable	Frequency	Percentage
How often do you engage your patients by educating/creating awareness of existing diseases and how to prevent them?	Daily	30	29.1
	Weekly	64	62.1
	Monthly	9	8.7
Do your patients have to pay for any of the services rendered in this facility?	Yes	16	15.5
	No	87	84.5
Do your patients receive immunisation services according to National Programme on Immunization?	Yes	103	100.0
	No		
Do your patients receive treatment for malaria and diarrhoeal diseases?	Yes	103	100.0
Do you have any of the following drugs in your pharmacy (only the "yes" proportion was shown)	Zinc tablet	101	26.3
	Artemeter-lumenfantrine	102	26.6
	ORS	101	26.3
	Cotrimoxazole	64	16.7
	Paracetamol	102	26.6
Do you have a portable source of water in your facility?	Yes	102	99.0
	No	1	1.0
Do you offer mental health services in this facility?	Yes	26	25.2
	No	77	74.8
Do you run antenatal care, delivery, postnatal and family planning services in your facility?	Yes	103	100.0
Do you have hand-washing basins at the entrance of your facility and do people practice hand washing?	Yes	103	100.0
Do your patients receive dental care services in your facility?	Yes	26	25.2
	No	77	74.8
Do you offer nutritional counselling and lifestyle modification medical services?	Yes	103	100.0

Table 3: Association between the respondents' socio-demographic characteristics and the utilization of BHCPF.

Variables	Sub-variables	Level of utilization of BHCPF by patients (n=281)		Statistics
		Poor (n=19)	Good (n=262)	
Age (years)	17-39	9 (5.5)	155 (94.5)	χ^2=1.267# p=0.531
	40-59	9 (8.2)	101 (91.8)	
	60 and above	1 (14.3)	6 (85.7)	
Sex	Male	6 (9.5)	57 (90.5)	χ^2=0.911# p=0.340
	Female	13 (6.0)	205 (94.0)	
Level of education	SSCE	3 (7.0)	40 (93.0)	χ^2=0.822# p=0.991
	OND	7 (6.3)	104 (93.7)	
	HND/BSC	6 (6.9)	81 (93.1)	
	Masters	1 (9.1)	10 (90.9)	
	PhD	0 (0.0)	2 (100.0)	
	Primary	1 (12.5)	7 (87.5)	
	Others	1 (5.3)	18 (94.7)	
Marital status	Single	6 (8.7)	63 (91.3)	χ^2=2.080# p=0.556
	Married	13 (6.5)	187 (93.5)	
	Separated/divorced	0 (0.0)	9 (100.0)	
	Widowed	0 (0.0)	3 (100.0)	

#Likelihood ratio

Table 4: Association between the respondents' utilization of BHCPF and the level of satisfaction.

Variables	Sub-variables	Level of Utilisation of BHCPF by Patients (n = 281)		Statistics
		Poor (n=19)	Good (n=262)	
Level of satisfaction	Satisfied	19 (6.9)	257 (93.1)	χ^2<0.001* p=1.000
	Unsatisfied	0 (0.0)	5 (100.0)	

*Continuity Correction.

Table 2 shows the pattern of utilization of basic health care provision funds by management of primary healthcare facilities. The majority (62.1%) of the facilities engaged their patients weekly by educating or creating awareness of existing diseases and how to prevent them. Similarly, 84.5% said patients do not have any of the services rendered in their facilities. All (100.0%) respondents said their patients receive immunization services according to the National Programme on Immunization. Furthermore, all the facility management also said their patients receive treatment for malaria and diarrheal diseases and all of the facilities said they have hand-washing basins at their facilities and their patients practice hand washing. They all claimed to be offering nutritional counselling and lifestyle modification medical services and ran antenatal care, delivery, postnatal and family palling services in their facilities.

Furthermore, more than one-fifth of the respondent management have zinc tablets, artemether-lumefantrine, ORS and paracetamol while only 16.7% have cotrimoxazole. Only 25.2% offer mental health services and dental care services in their facilities (Table 2).

Table 4 shows the level of satisfaction of patients with service delivery in PH facilities. The majority (98.2%) of the patients were satisfied with the service delivery in PHC facilities compared to only 1.8% who were unsatisfied with the service delivery (Figure 4).

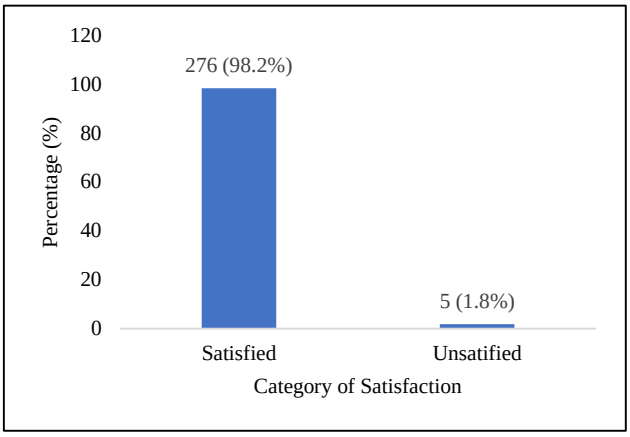

Figure 4: Level of satisfaction of patients with service delivery in PHC facilities.

Table 3, the association between the respondents' socio-demographic characteristics and the utilization of BHCPF. Although none of the associations was statistically significant, the majority of all the age groups and gender was found to have good utilization of BHCPF, while 100.0% of the respondents who have PhD have good utilization, at least 90 out of every 100 of those with SSCE, OND, HND/BSC, masters and others have good utilization, 93.0%, 93.7%, 90.9% and 94.7% respectively.

In terms of marital status, divorced and widowed respondents have 100.0% good utilization of BHCPF compared to other marital statuses (Table 3).

Table 4 shows an association between the respondents' utilization of BHCPF and their level of satisfaction. Although not statistically significant, more of the patients (93.1%) who were satisfied with the care received were also found to have good utilization of BHCPF (Table 4).

DISCUSSION

This study effects of the utilization of basic health care provision funds on service delivery in primary health centres in Osun State. In this study, there was a 100% response rate. The mean age of the patient respondents was 36.61±10.3, while the management respondents were 43.48±7.1. the commonest age group among the patients was 17-39 while the commonest among the management was 40-59, which could be attributed to the fact the majority of the working age in Primary healthcare facilities falls to the range 40-59, whereas the age concentration may differ for the patients based on the available respondents during data accumulation, this is also in line with Nwokoro et al study where more their respondents who utilised the health facilities were within the age 18-29.[16] Furthermore, the commonest age among the management is close compared to a non-Nigerian study which reported 31-40 years old as the commonest age in their study.[17]

There were more females than males among both patients and management which is in tandem with that of another study on determinants of PHC utilisation conducted in Enugu state Nigeria where more than two-fifths of their respondents were female and with another in southwest Nigeria, but on the contrary to a study conducted in Kenya county where more than half of their respondents were male.[16-18] The majority of both patients and management were married which is similar to the Sule et al study that reported more than two-thirds of their respondents to be female.[18] Also, this study contradicted Sule et al study in terms of highest educational attainment, this study HND/BSC to be the commonest while Sule et al, had secondary level as the commonest.[18]

In this study, more than two-thirds of the respondents among the management claimed that they received basic health care provision funds for their facilities monthly, while the rest claimed they do receive theirs quarterly, this could be attributed to the impact of health budget on primary care and public health as stated by.[19]

This study's findings also revealed a higher level of utilisation of BHCPF supported by PHC by patients as more than four-fifths utilised the services which is quite higher compared to the Nwokoro et al study where less than half of the patients utilised the PHC facilities.[16] However, this finding is similar to another Nigerian study where the majority have good utilisation of PHC facilities.[18]

The majority of the health facilities engage their patients in education and awareness of existing diseases every week, this is expected because most public clinics have designated days for different thematic health programmes per week, hence patients are not likely to be sensitized/engaged more than once per week except if the patient is enrolled for more than one programme, more than four-fifths said they rendered their services for free which is backed up by a Kenyan study which reported similar findings as evidence to the declaration of Kenyan government for free health care services.[17] Similarly, the majority of the facilities offer immunization services, essential drugs provision including zinc tablets, artemether-lumefantrine, ORS, cotrimoxazole and paracetamol, they also antenatal care, delivery, postnatal and family planning services and nutritional counselling and lifestyle modifications while less than half offers dental care services in your facility and mental health services, this expected as these areas are core components of PHC and the areas covered by BHCPF, hence they are likely to be available in almost all the facilities.

In terms of satisfaction with care received, this study revealed that the majority were satisfied with the care received which is similar in line with Boovaragasamy and Narayana and Mohamed et al, where more their respondents were reported to have a high level of satisfaction with care received.[20,21] And this could also be attributed to the predictable fact that services are affordable and available as a result of BHCPF.

When relating the patients' socio-demographic characteristics to the respondents with the utilisation level, although none of the associations was statistically significant, however, females utilised the facilities more than males which is similar to Nwokoro's study where more than half of the females utilised PHC compared to the males.[16] Those less than 60 years old were also found to utilise PHC facilities which are also in tandem with males where more of their respondents lesser than 60 years old were reported to have utilised PHC more.[16]

Furthermore, the relationship between the respondents' utilisation of BHCPF and the level of satisfaction, the majority who utilised the PHC facilities were also satisfied with the services provided, this could mean that the higher satisfaction level motivates the utilisation of PHC facilities.

Further study may look into the effects of utilization of basic health care provision funds on service delivery in primary health centres from a rural and urban comparison perspective. Other studies may also look at the research topic from another context such as cultural, political or geographical factors affecting utilization.

CONCLUSION

This study revealed that the commonest frequency of release of BHCPF to the BHCPF-supported PHC facilities was monthly, and there was higher utilisation of the services by patients in at least nine out of every ten patients. This study also found that the majority of the respondents were satisfied with the health services they were provided with at the BHCPF-supported facilities as 98.2% were found to have been satisfied. In terms of the pattern of utilisation of the facilities by the management, while the majority offers health services and programmes on immunization, antenatal, nutritional counselling, malaria treatment, provision of essential drugs etc, less than one-third of all the facilities offer the mental health services and dental health services. Although not statistically significant, satisfaction level was found to influence the utilisation of the PHC facilities by the patients. Comprehensive inclusion of mental and dental health services in BHCPF-supported PHC facilities is recommended.

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