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CC –BY Utilization of health facilities and preferred places of treatment for common health conditions in Lagos, Nigeria

DOI:<http://dx.doi.org/10.4314/njp.v46i1.4>

Accepted: 16th February 2019

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Abstract: *Background:* When people are ill, the options for health-seeking behavior are shaped by several factors. Understanding these options is likely to contribute to early treatment and better outcomes. The objective of this study was to investigate the utilization and preferred places for treating common health problems in Lagos, Nigeria.

Methods: A cross-sectional survey was conducted using both an interviewer administered questionnaire and focus group discussions to obtain data. Participants were recruited through multi-stage sampling methods from four local government areas in Lagos State. Conditions of interest included fever in children, cough, diarrhoea and vomiting and pregnancy care. The Statistical Package for Social Sciences (SPSS) version 22 software was used for analysis while the qualitative data was analyzed with ATLAS.ti software version 7. The level of significance was set at $p \leq 0.05$

Results: Two thousand participants were recruited. The mean age was 37.6 ± 10.21 years. Government hospitals were the most frequent usual source of health care (41%). Perceived effectiveness of treatment, speed of service and low cost were main reasons for these choices. Other sources of care such as drug store, nursing homes and tradi-medical facilities were preferred more frequently by more than a third of respondents for most conditions except for pregnancy care. Primary Health Care centers were the least preferred sources of care.

Conclusion: Primary Health Care centres were the least utilized sources of care. Increased advocacy is a recommended strategy to improve early presentation to health facilities.

Keywords: Common health problems, health-seeking behavior, patient preferences.

Introduction

When people fall ill, they utilize several treatment options. The options are shaped in part by anticipated treatments or health outcomes, cognition, experience, reflection and exist as the relatively enduring consequences of values.¹ The preferences may contribute to effective or ineffective treatment with impact on treatment outcomes. The preferences and utilization of health services is associated with the availability and accessibility of health facilities and the effectiveness and efficiency of the services provided. Patients' choices are related to personal characteristics, accessibility to health facilities, health system conditions and the quality of services. Differences can exist in health needs as well as in the effectiveness and the quality of care given by different health units and their locations, for example, urban.¹

In rural Nepal a study reported that people sought for formal healthcare only when sickness was moderate or severe whereas mild illnesses were treated at home. In addition, traditional healers were the first to be visited before other health workers.² A study from Tanzania reported that up to 54% of participants used primary health care centres (PHC) as the most common first option for child care followed by pharmacies. In addition, women in urban areas and those with higher level of education in that country utilized higher level hospitals more commonly although the quality of care was sub-optimal.³

A study that compared the perceived quality of private and public health services in Lagos, Nigeria reported positive perceptions of the service quality provided by

both healthcare systems. However, when high-level hospitals were excluded, the scores for the private hospitals were higher. The under-utilization of health services in the public sector has been almost a universal phenomenon in developing countries.⁴ A study from Osun State, Nigeria showed that mothers usually bought drugs from chemist shops prior to utilizing health facilities and only a third presented to health facilities within 24 hours of the onset of illness. The level of maternal education was significantly associated with initial treatment of febrile illness.⁵

A study of preferred places for treatment of common health problems in Abeokuta, Nigeria revealed that government owned general hospitals were the most preferred places followed by private hospitals and PHC centres were the least preferred. Significant factors that influenced the use of government hospitals more frequently than private hospitals were costs, attitudes of providers, effectiveness of treatment whereas short waiting time was significant in the choice of private hospitals, but proximity was not significant.⁶ In Ile-Ife, Nigeria, 60% (117/183) of pregnant women utilized approved health facilities for delivery. Significant factors associated with the non-use of such facilities were maternal age > 30 years, religious beliefs, distance, low level of maternal education and unfriendly health workers.⁷

In Nigeria, late presentation to hospitals is often associated with poor prognosis and has many causes including misdiagnosis, wrong treatment and seeking help from inappropriate places. As many as 86% (12,140/14487) of eligible patients in Nigeria presented late for HIV care.⁸ In another study, 55% (454/824) of patients with eye problems presented late (after three months of disease onset) to a teaching hospital. The late presentation was associated with age greater than 80 years, female gender, residence greater than 20 kilometres from the hospital and individual level deprivation. Common reasons for late presentation to care amongst adults and children aged six years with cleft palate in Nigeria were lack of money, lack of health care services nearby and lack of awareness/ availability.¹⁰ Late presentation was associated with higher fatality rate of up to 55% amongst patients presenting with ileal perforation from typhoid fever.¹¹ If treatment outcomes are to improve, patients must present early to appropriate facilities. Thus, an investigation of the choices patients make about where they receive treatment is important. This study was carried out among adult residents in Lagos State to determine the preferred choice of health facilities for selected health conditions as well as the factors that influences their choices.

Materials and methods

Background information to study area

Lagos State was created on May 27, 1967. It is in the Southwest geopolitical zone of Nigeria. It was the capi-

tal of Nigeria until 1991. Ikeja is the capital city of the State. Lagos remains the economic capital of Nigeria. The State has 20 Local Government Areas (LGA). Sixteen of the LGAs are classified as urban and four are rural. Lagos is home to virtually all tribes of Nigeria, Yoruba is the predominant Nigerian language. Health facilities are provided through a mix of private and public facilities. The health system has three tiers; primary, secondary and tertiary.

Study design

The study design was a descriptive cross-sectional using both quantitative and qualitative methods to investigate the preferred places of care for common health problems. An interviewer-administered questionnaire was used to obtain information for the quantitative aspect of the study. Focus group discussions (FGDs) were held for the qualitative aspect in the four LGAs.

Sample size determination

The required sample size for quantitative data collection was determined using the appropriate formula for prevalence studies. The statistical assumptions for determining the minimum sample size were: a type 1 error rate of 5%, a prevalence of 0.58 of positive perception of health workers by community members, a precision of ± 2.5 percentage points and a 20% non-response rate. Thus, the calculated minimum sample size was 1919, which was rounded up to 2000. The participants for the FGD were purposively selected. One FGD session was held in each LGA and the number of participants was averagely ten (10).

Sampling techniques

A multi stage sampling method was used to select the subjects for quantitative data collection in this study. In the first stage, out of the 20 Local Government areas (LGA), four LGAs (three urban and one rural) were selected using stratified random sampling by balloting. These were Ikeja, Mushin, Ojo (urban) and Badagry (rural) LGAs. In the second stage, at each of the selected LGA, two wards were selected by simple random sampling (ballot). In the third stage, using the sampling frame of all streets in the selected wards, a minimum of 10 streets were selected by using a table of random numbers.

The fourth stage involved selecting a consenting respondent from each household from the selected streets. On each street, the Local Government house numbering system was followed, and each consecutive house starting from the first number was approached. This was done on all selected streets until the sample size was attained. Twenty-five respondents were selected from each street. An equal number (500) of respondents were selected per LGA. For qualitative data collection, one focus group discussion was held per LGA. FGDs were held for female participants in Mushin, Ojo and Badagry and for male participants in Ikeja. Ten participants were

selected via purposive sampling to participate in each FGD session.

Survey Instruments

Questionnaire

An interviewer- administered, pre-tested questionnaire was used to collect data. The instrument had been developed from a review of the literature on the subject and in tandem with the objectives of the study. The instrument had two sections. The first dealt with socio-demographic characteristics of the respondents such as age, gender, educational level and occupation. The second focused on utilization of health facilities, accessibility, preferred places for treatment of common health conditions and reasons for use. The health problems of interest were fever in children, cough and catarrh in children, diarrhea in children, fever in adults and pregnancy care.

Face validation of the instrument was done by all the investigators. It was pretested among residents of another LGA which was not amongst the four utilized for the study. The alpha Cronbach reliability coefficient was 0.792. The instrument was modified and administered after pre-testing.

FGD guide

A ten-itemed FGD Guide was developed in line with the study objectives and used in the conduct of the FGD. The guide sought for information on the utilization of health facilities, competence of health workers and problems encountered by the respondents during visits to health facilities.

Data Collection

The quantitative data was collected by four trained research assistants (who had a minimum of secondary school education) between February and March 2017. Participants for the FGD were invited and reminded via text messages and calls. The selected participants were within the same age range for each FGD. Each session was anchored by the researchers and trained research assistants taking on the roles of a moderator, recorder and note taker. All sessions had audio recordings done after obtaining written informed consent from the participants.

Data management

Quantitative data

All completed questionnaires were reviewed on the field and in the office for completeness, consistency of information. Data was entered using Statistical Package for the Social Sciences version 22. Data was coded and cleaned before data entry. Health facilities were categorized into four namely government hospitals, private hospitals, PHC centres and others (drug stores, nursing homes, traditional medicine). Furthermore, government facilities were government-owned hospitals and PHCs while private hospitals, pharmacies and nursing homes were grouped as private sources of health care. Associa-

tion between various respondents' characteristics and utilization of services as well as preferred places of care for fever in children was sought for using the Chi-Square test.

Qualitative data

Qualitative data was analyzed using ATLAS.ti software version 7. The data analysis was conducted using constant comparison analyses and cross-case analysis conducted as required.

Ethical considerations

The participants were informed of the objectives of the study and its potential benefits for the health system and the state. There was no risk of harm to them as there was no invasive procedure. Written informed consent was obtained from each participant prior to enrollment in the study. Ethical clearance was obtained from the Lagos State University Teaching Hospital (LASUTH) ethics committee with Reference Number: LREC/06/10/755 (08/11/16-08/08/17).

Results

Two thousand respondents were recruited. The mean age was 37.6 ± 10.21 years. More than three quarter (88%) of the respondents were less than 50 years of age. Majority (76%) of the respondents were married. Most (66%) of the respondents had secondary school education and most were self-employed (Table 1). Table 2 shows the accessibility and utilization of health facilities. Hospitals both government owned and privately owned were the nearest facilities to respondents; residences although government hospitals were the nearest. Most of the facilities were accessible within 30 minutes of walking and a third were located within walking distance of ten minutes or less. Hospitals were by far the usual sources of health services with only 7% of residents utilizing PHC centres. Figure 1 shows the proximity of facilities to residences of respondents with government hospitals being more available and nearest. Figure 2 shows the utilization of health facilities by proximity. When government- owned or private hospitals were the nearest, they were the most frequently utilized. However, when PHCs were the nearest, they were not the most utilized.

Fig 1: Proximity of various sources of health care services to respondents

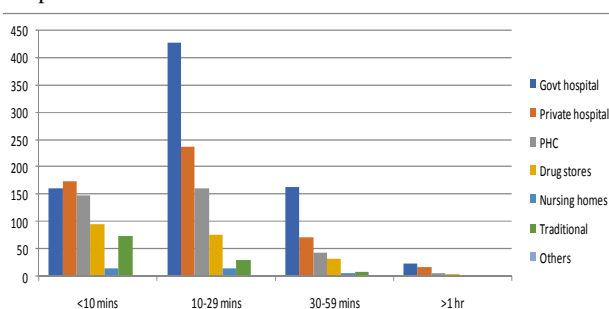


Table 1: Socio-demographic characteristics of respondents

Variable	N	%
<i>Age group (years)</i>		
< 20	13	0.6
20-29	456	22.8
30-39	774	38.7
40-49	495	24.8
50-59	179	9.0
> 60	63	3.1
Unstated	20	1.0
	2000	100
<i>Gender</i>		
Female	1105	55.2
Male	895	44.8
<i>Marital status</i>		
Single	422	21.1
Married	1523	76.1
Others	45	2.8
<i>Educational status</i>		
No formal Schooling	54	2.7
Primary	167	8.4
Secondary	1324	66.2
Tertiary and above	454	22.7
<i>Occupation</i>		
Housewife	47	2.4
Student	69	3.5
Unskilled worker	629	31.5
Skilled worker	906	45.3
Professional	239	12.0
Unemployed/others	106	5.3
<i>Income (N)</i>		
1,000-10,500	148	7.4
10,501-18,000	125	6.2
18,001-50,000	751	37.6
50,001-100,000	170	8.5
> 100,000	49	2.7
Not stated	757	37.9

Table 2: Accessibility and use of health facilities by respondents

Variable	N	%
<i>Closest health facility</i>		
Government hospital	775	38.8
Private Hospital	503	25.2
Primary Health Care Centres	359	17.9
Others	363	18.1
<i>Walking distance to closest facility (minutes)</i>		
< 10	669	33.4
10-29	952	47.6
30-59	325	16.3
> 60	54	2.7
<i>Usual source of health care</i>		
Government hospital	814	40.8
Private Hospital	760	38.0
Primary Health Care Centres	137	6.9
Others	286	14.3

The reasons for preferred places of health care are shown on Table 3 and effectiveness of services was the most frequently mentioned reason (71%) amongst all respondents. Respondents who preferred private health facilities more significantly made the choice because of effectiveness of treatment and faster speed of service ($p < 0.001$). However, affordability of costs, proximity to residence, perceived good services and availability of

good equipment were the significant reasons for those who preferred government owned facilities. The socio-demographic characteristics of respondents associated with preferred health facilities are shown on Table 4. More respondents (55%) younger than 40 years utilized private hospitals than those older (48%, $p < 0.05$). A higher proportion of male respondents (91%) than women (88%) utilized private facilities than government ones ($p = 0.016$). The same observation was true for increasing level of education and income. Marital status did not show any significant association in the utilization of facilities.

Findings from the FGD revealed that some participants had changed their preferred health facilities for different reasons such as attitude of health workers, quality of services, cost of services and distance of health facilities. Although participants preferred privately owned health facilities more than government owned facilities, it was observed that most of the participants had some earlier unpleasant encounters when utilizing government owned facilities and their encounters had reinforced their preferences.

Some FGD participants mentioned that public hospitals delay their clients.

A female participant in Ojo explained, “it depends on sickness, because when I know that it is something a bit serious, I go to general, if it is malaria and others, because they waste time in general, I use private.”

Another female FGD participant in Ojo reported that she used private and public health facilities for different services. She receives immunization for her children at a public health facility and other treatments in a private facility.

“Participant 11: I stay at Iba, that’s where I stay, and I use Elshadai at Iyana school.

Moderator: that’s private?

Participant 11: private hospital.

Moderator: why?

Participant 11: my own, when I give birth, I take my children or babies to health centre.

Moderator: for immunization?

Participant 11: yes, I use that for immunization, but when it comes to treatment, I go to Elshadai (private facility). (40-year-old_female_single_Ojo LGA)

Many FGD participants preferred private hospitals to public hospitals because of the attitude of the staff as shown in the quote:

“I use private hospital, that’s where I do deliver my babies, and that’s where I receive treatment, because I don’t like general hospital at all, because the way they are, when you get there, when I first got pregnant of my first born, that I went there for registration, they said they will collect blood first, that my husband’s blood will have to be taken for me first, that I will need blood

compulsorily, that I should go to primary health center, when I got there, those ones said, I will go back to general hospital, I angrily went back home, I sat at home for long, before I later started going to private hospital... when you get to private hospital, they won't ask anything from you, they will strive to save your life first, before they will ask for money, their money might be much, but I like the way they attend to me. I am not saying that they don't attend to patients very well in general hospitals, but I don't use them [general hospitals], because human life is nothing to them [meaning the general hospital staff do not value human life], and there is a mortuary beside them. So that's why I don't use there." – (37years old female married Badagry LGA)

The preferred places of treatment by respondents showed that PHCs were the least preferred facilities for all the conditions of interest. Up to 30% of respondents preferred other sources (nursing homes, pharmacies) for these conditions. However, 80% of respondents preferred hospitals (both government and private) for pregnancy care (Table 5). Respondents' socio-demographic factors associated with the preferred place of care for fevers in children are shown on Table 6. A higher proportion of women (53%), preferred PHCs whereas those with higher educational status, those not married, and income preferred other sources of care. Age was not a significant factor in the preference of health facilities.

Fig 2: Respondents' utilization of the closet health facility to their residence

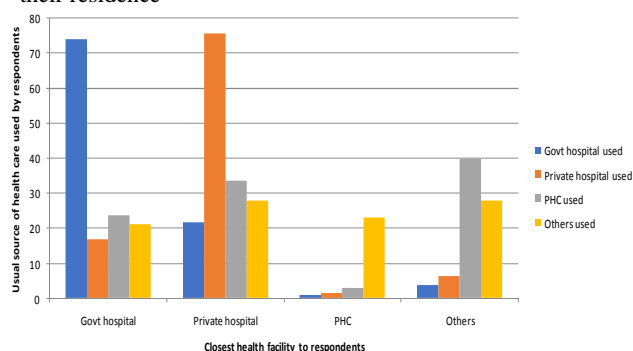


Table 3: Reasons for respondents' utilization of health facilities

Reasons	Government facilities N (%)	Private facilities N (%)	Total	X2/ p value
Effective treatment				
Yes	635 (44.6)	425 (55.4)	1425	18.3, < 0.001
No	314 (55.3)	254 (44.7)	568	
Fast service				
Yes	269 (25.7)	779 (74.3)	1049	392.2, < 0.001
No	653 (68.9)	295 (31.4)	968	
Affordable service				
Yes	590 (67.7)	282 (32.3)	873	249.3, < 0.001
No	359 (32.9)	764 (68.0)	1123	
Proximity to house				
Yes	437 (52.1)	401 (47.8)	839	11.69, < 0.001
No	513 (46.3)	645 (55.7)	1158	
Perceived good services				
Yes	315 (66.7)	472 (33.7)	787	28.9, < 0.001
No	633 (52.4)	574 (47.6)	1207	
Good equipment				
Yes	387 (52.4)	351 (47.6)	738	10.4, 0.01
No	564 (44.9)	693 (55.1)	1257	

Table 4: Socio-demographic factors associated with utilization of health facilities

Variable	Government facilities n (%)	Private facilities n (%)	Total	X2/ p value
Age (years)				
< 40	560 (45.0)	683 (55.0)	1243	8.09, 0.004
>40	380 (51.8)	354 (48.2)	734	
Gender				
Male	77 (8.6)	815 (91.4)	892	5.79, 0.016
Female	133 (12.1)	970 (87.9)	1104	
Marital status				
Single	45 (9.8)	414 (90.2)	459	0.23, 0.63
Married	165 (10.7)	1371 (89.3)	1536	
Educational level				
None/primary	13 (6.9)	208 (94.1)	221	11.12, 0.004
Secondary	160 (12.1)	1162 (87.9)	1322	
Tertiary	37 (8.2)	414 (91.8)	451	
Income				
>18,000	179 (65.6)	94 (34.4)	273	42.6, < 0.001
18,000-50,000	341 (45.5)	409 (54.5)	750	
< 50,000	84 (38.4)	135 (61.6)	219	

Table 6: Respondents' Socio-demographic factors associated with use of health facilities for treatment of fever in children

Variable	Primary health care centre n (%)	Other health facilities n (%)	Total	X2/ p value
Age (years)				
< 40	138 (11.1)	1102 (88.9)	1240	1.31, 0.25
>40	71 (9.4)	684 (90.6)	755	
Gender				
Male	368 (41.2)	525 (58.8)	893	26.2, < 0.001
Female	583 (52.8)	521 (47.2)	1104	
Marital status				
Single	194 (41.9)	269 (58.1)	463	7.61, 0.005
Married	757 (49.3)	777 (50.7)	1534	
Educational level				
None/primary	138 (62.4)	83 (37.6)	221	31.1, < 0.001
Secondary	633 (47.9)	688 (52.1)	688	
Tertiary	180 (39.6)	274 (60.4)	454	
Income				
>18,000	12 (4.4)	261 (95.6)	273	13.72, < 0.001
18,000-50,000	83 (11.1)	667 (88.9)	750	
< 50,000	30 (13.7)	189 (86.3)	219	

Table 5: Preferred places of treatment for selected health problems

Health condition	Preferred place of care				
	Primary Health Care Centre n (%)	Private Hospital n (%)	Government Hospital n (%)	Other sources n (%)	Total n (%)
Fever in children	210 (10.5)	582 (29.2)	604 (30.3)	599 (30.0)	1995 (100)
Cough and catarrh in children	165 (8.3)	413 (20.7)	446 (22.4)	971 (48.7)	1995 (100.0)
Diarrhoea in children	258 (12.9)	465 (23.3)	495 (24.8)	777 (38.9)	1995 (100.0)
Fever in adults	184 (9.2)	476 (23.8)	511 (25.6)	829 (41.4)	2000 (100.0)
Pregnancy care	189 (9.4)	762 (38.1)	797 (39.8)	252 (12.6)	2000 (100.0)

Discussion

This study set out to investigate the utilization of health services and preferred places of care for common health problems. Up to 80% of respondents reported that health facilities were within 30 minutes walking distance from their homes thus ensuring adequate geographical coverage. The most proximal facilities were either government (39%) or private hospitals (25%). The proximity of health facilities observed in this study is like that reported in a study from Abeokuta, Ogun State, Nigeria.⁶ This proximity is expected to make it easier for clients to utilize such facilities as long distance to facilities has been shown to be a major barrier to the use of healthservices.¹² However, unlike what was expected, the proximity did not match the utilization. The respondents showed a preference for hospitals even when PHCS were the nearest to their homes. The low level of utilization of PHCs in this study contrasts with a 54% use reported from Tanzania³ but in agreement with a study from eastern Nigeria where the utilization of health centres for childhood fever was low (2% amongst mothers in rural areas and 7% amongst mothers in urban areas).¹³ The low utilization may be related to perceived inadequacies of manpower, drugs and diagnostic facilities in the PHCs rather than disease severity. The implication of such non-use of PHCs is that simple health problems that are meant to be treated at the lower levels are then brought to the higher levels of care with resultant overcrowding, long queues, long waiting times and long appointments at the latter which undermine confidence in the health system and may attract patients to non-formal facilities.

The choice in the utilization of government and private facilities in this study was found to be influenced by several factors. Effectiveness of service and speed of services were the more important factors amongst persons using private facilities which imply a preference for quality amongst these respondents. For those who chose government facilities, affordability of costs, proximity to residence and availability of equipment were the more important factors. These reasons are in tandem with a study that investigated health care preferences of community members in Abeokuta except that proximity which was reported in our study was not significant in that study.⁵ The difference may be that there are higher opportunity costs associated with proximity and time in

a busy city like Lagos more than in Abeokuta. Related to this was the finding that persons with higher education and income used private facilities more than government reflecting the choices of an enlightened and more informed citizenry who want value for money. It is therefore important for government facilities to improve the quality of services they offer if they are to increase patronage. The FGD findings also showed that staff attitudes were poorer in government facilities thus hindering utilization of services which is consistent with a study from Ile-Ife.⁷

For the five selected common health conditions, there was a very low preference for PHCs, most respondents preferred hospitals and up to third preferred other sources of care. For self-limiting conditions such as cough and catarrh in children, pharmacies and other sources of care were preferred by almost half of the respondents which reflects in part the understanding of the respondents that the conditions were not severe. This preference is not without its limitation as such users need to be reminded to move to higher levels of care if the symptoms do not improve within a few days. A report from Osun state had shown that most mothers visit these other sources to purchase medicines for their children before coming to formal health facilities like the finding of this study.⁵

Fever in a child may be viral or due to malaria in Nigeria and should be first seen at a PHC. This was not the case in this study due mainly to reasons of loss of confidence in the PHCs amongst clients and agrees with reports by other researchers.^{5,13} However, a study from Osun state Nigeria reported that 69% (86 of 137 mothers) visited government health centre more frequently for treatment of childhood fever followed by local patent medicine stores (11%). The use of orthodox medicines combined with herbal medicines was adopted by 91% of the mothers. The reasons for not seeking medical treatment at existing formal health facilities were high costs, lack of access to facilities, and preference for herbal remedies.¹⁴

These are areas that need to be addressed if government health centres will be used more frequently and the extension of health insurance programme to rural areas may be helpful. Strengthening services at PHCs will be of benefit to the entire health system as bypass will be lower and turnaround time at the higher levels of care will be shorter. The more use of other sources of care for childhood fevers by the single, those with higher levels

of education and income may reflect higher economic power and preference for higher quality. These should be considered in improving the services available at PHCs.

Conclusion

The utilization of PHC is low and were the least preferred places of care amongst respondents. The main reasons were because of perceived inadequate staffing and facilities. We recommend that the Lagos State government should revitalize PHCs especially in the provision of adequate manpower and simple diagnostic facilities which will stimulate confidence in the citizenry and improve utilization. It is important that staff receive training on inter personal relationships to improve staff attitudes. Continuous advocacy is also needed to achieve the same and discourage utilization of non-formal sources of health care.

Limitations of the study

The study limitations included social desirability bias as respondents are known to speak positively to interview-

ers. Careful explanation of the objectives and the anonymity required helped to minimize this. In addition, recall bias is a known limitation of questionnaire-based surveys.

Acknowledgements

The authors wish to thank the respondents who participated in the study and the cooperation received from the Medical Officers of Health of the Local Government Area where the study took place (Mushin, Ikeja, Ojo and Badagry). We are grateful to the data collectors and the field supervisors.

Authors contributions

OEO participated in data collection, data analysis and manuscript writing

AMR participated in data collection, data analysis and manuscript writing

OOO was responsible for concept, design, participated in data analysis and manuscript writing

All the authors approved the final manuscript

Conflict of interest: None

Funding: None

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