

**ORIGINAL ARTICLE****Utilization of Primary Health Care Services in Jaba Local Government Area of Kaduna State Nigeria**Agofure Otovwe<sup>1\*</sup>, Sarki Elizabeth<sup>1</sup>**OPEN ACCESS**

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**ABSTRACT**

**BACKGROUND:** Primary health care was designed to provide accessible health care for all. However, most primary health care facilities are in various states of disrepair, catering for less than 20% of potential patients in the population. This study was designed to investigate the utilisation of primary health care services in Jaba Local Government Area of Kaduna State Nigeria.

**METHODS:** The study employed a cross-sectional study design conducted among 383 respondents utilising simple random sampling techniques. A pretested semi-structured questionnaire was administered to obtain information from respondents, while descriptive statistics was used to analyse the data.

**RESULTS:** The results show that almost all of the respondents, 333(97.90%), were aware of the existence of primary health care services in their community. Furthermore, the majority of the respondents, 304(89.40%), utilized primary health care services while 293(86.20%) and 212(62.40%) were satisfied with the amount of charges for services and the supply of drugs respectively. According to the respondent, weak services in primary health care includes; personal hygiene and nutritional education, management of chronic diseases and cancer screening. Factors that influence the utilization of primary health care services according to the respondents were availability of trained personnel (AOR=1.828 95% CI=0.410-1.672), attitude of staffs (AOR=1.114 95% CI=0.527-2.355), waiting times (AOR=1.110 95% CI=0.584-2.224) and availability of diagnostic services (AOR=0.951 95% CI=0.472-1.918).

**CONCLUSION:** The study highlighted the weaknesses in some of the services offered at the various primary health centres and the factors which can hinder the residents from patronizing primary health care services.

**KEYWORDS:** Primary Health Care Services, Utilisation, Satisfaction, Jaba

## INTRODUCTION

The International Conference on Primary Health Care (PHC) defined primary health care as an essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and their families in the community through their full participation and at a cost that community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination (1). The goal of PHC was to provide accessible health for all by the year 2000 and beyond. Consequently, to achieve this goal, the National Health Policy (2) brought a comprehensive health care system based on primary health care. The main objective is to promote, protect, prevent, restore and rehabilitate all citizens within the context of available resources. As a result individuals and communities are assured of productivity, social well-being and enjoyment of living.

The health services, based on PHC, include among other things, education concerning prevailing health problems and the methods of preventing and controlling them, promotion of food supply and proper nutrition, maternal and child care (including family planning, immunization against the major infectious diseases, prevention and control of locally endemic and epidemic diseases) and provision of essential drugs and supplies. However, primary health care, which is supposed to be the bedrock of the country's health care policy, is currently catering for less than 20% of the potential patients (3). While most PHC facilities are in various states of disrepair, with equipment and infrastructure being either absent or obsolete, the referral system is almost non-existent (4).

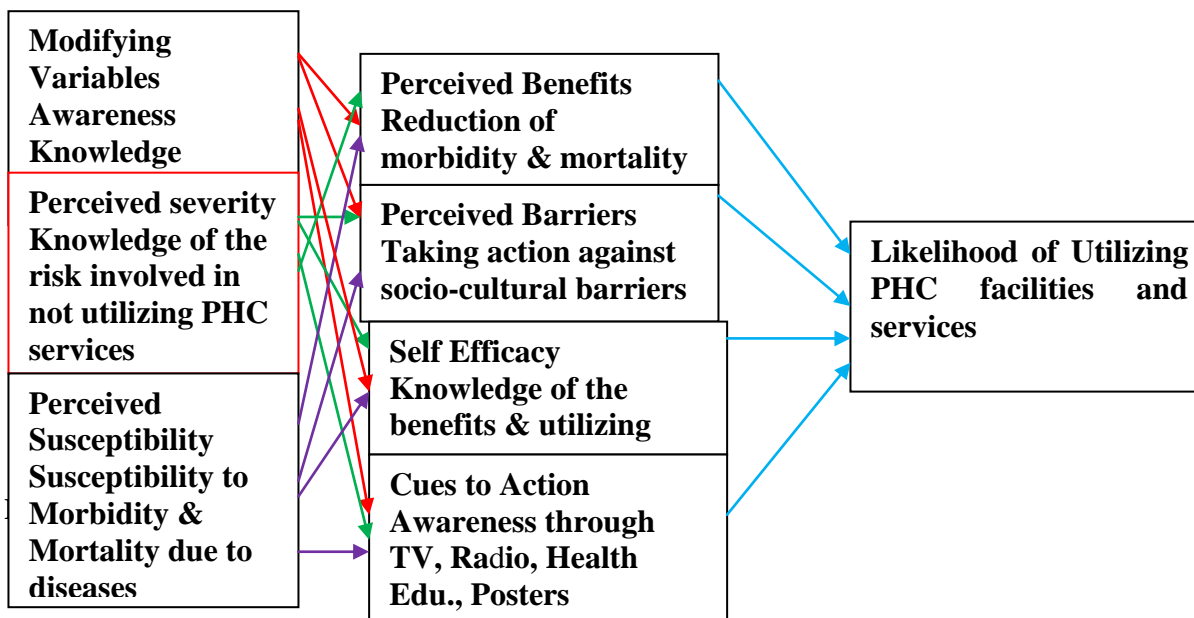
This state of most PHC facilities does not only pose danger to the nation but also affects the rate of utilization of primary health care facilities. For

example, health outcomes and utilization of health care in Nigeria have been found to be low but vary across regions with the Northeast and Northwest regions and rural areas faring considerably worse off than the rest of the country, a pattern largely attributed to the high levels of poverty in the north (5). Similarly, in a study in South Africa on the 285 participants, 209(73%) people were reported to have utilized just one of the different services available while 76(27%) people utilized 2 to 3 of the services (6). Also, a study in Southwest Nigeria showed that only 42.50% of the participants in the study utilized primary health care services (7)

Furthermore, several barriers have been shown to influence rate of utilization of PHC facilities. Although facilities in all states in Nigeria offer exemptions and waivers to a limited degree in services such as routine immunization, family planning and antenatal care; the cost of receiving health care remains a main barrier to access health services in the country (8). Similarly, differences in type of facilities across urban and rural areas have been shown to influence utilization of health services. As expected, higher level facilities including facilities in urban areas are more likely to offer a larger variety of services seven days a week, 24 hours a day, thus are more likely to have more patronization of health care services than their rural counterpart (5). Other barriers highlighted to affect utilization of primary health care services includes socioeconomic, psychological, demographic or geographical barriers (9).

Therefore, this study was designed to investigate the utilisation of primary health care services in Jaba Local Government Area of Kaduna State Nigeria. The Health Belief Model (HBM) was used to explain the utilization of primary health care services among residents of Jaba Local Government Area of Kaduna State.

Diagrammatic representation of the health belief model on the utilization of PHC services by the residents of Jaba Local Government Area of Kaduna State



*Figure 1: Adapted from U.S. Department of Health and Human Services, 2005*

## METHODS

The study is a cross-sectional design, utilizing quantitative method of data collection to assess the utilization of primary health care among residents of Jaba Local Government Area of Kaduna State. Jaba is a Local Government Area in Kaduna State, Nigeria. Its headquarters is in the town of Kwoi (Har Kwain) in Hyam, the language of almost all the entire inhabitants of the local area. The people know themselves as the Ham and speak Hyam but are called 'Jaba' by the Hausa. The study population consists of residents of communities where primary health care centres are located in Jaba Local Government Area of Kaduna State. The communities include Nkunchem, Daddu, Fai, Sab-Zuro, Sabon Gari Chori, Nok, Nduya, Fada, Samban Gida.

**Sample size determination:** The formula for sample size calculation for single proportion was used for the study. The parameters used for the

calculation are: Z at 95% confidence interval obtained from statistical table of normal distribution, Prevalence of 42.50% which is the prevalence of utilization of PHCs services in a study conducted in Southwest Nigeria (7) and degree of accuracy desired at 0.05. The sample size of 340 was obtained after calculation.

**Inclusion criteria:** Respondents for the study were those residing in and around the nine communities where PHC is located in Jaba Local Government Area. This was done in order to assess their utilization and satisfaction of PHC services.

**Exclusion criteria:** All residents of communities outside the nine communities where PHC is located were excluded from the study.

**Sampling procedure:** The nine communities where primary health care was located in Jaba Local Government Area were selected for the study. Thereafter, stratified sampling was used to proportionally allocate number of respondents to be sampled from each of the selected communities, which gave the following figures Nkunchem (50) Daddu (50) Fai (30) Sab-Zuro (20) Sabon Gari Chori, (50) Nok (30) Nduya (30)

Fada (50) Samban Gida (30). Thereafter, the respondents were sampled through simple random sampling technique from the selected communities.

**Instrument for data collection:** The instrument for data collection was a semi-structured questionnaire which was developed in part by the researcher, while some part was adapted from the World Bank working paper of improving Primary Health Care Delivery in Nigeria, Evidence from Four States (5). The questionnaire was divided into six sections A-E. It was distributed to sampled respondents on the day of data collection in the selected communities, and the filled questionnaire was retrieved immediately. Trained nurses who were recruited from PHCs in the selected communities assisted the researcher in the distribution of the questionnaires.

The validity of the questionnaire was improved by pre-testing it. Furthermore, the reliability of the instrument was determined using the Cronbach's Alpha technique. The data were analyzed with Statistical Product for Service Solution (SPSS) version 15.0 (IBM Corp., Chicago, USA). Descriptive statistics such as mean, standard deviation and inferential statistics such as Chi-square and logistic regression were used to test for associations between variables of interest set at  $P < 0.05$ .

**Measurement:** The level of utilization of primary health care services was measured using a 14-point scale. The scales were 0-6 as poor utilization primary health care services and  $>6$  as good utilization of primary health care services.

**Ethical consideration:** Ethical approval for the study was obtained from the ethical committee of the Department of Public and Community Health, Novena University.

**Limitation of the study:** The main limitation of the study was the possibility of recall bias. The study solely depended on responses of the participants without doing a confirmatory check if the participants actually attended PHCs prior to the study.

## RESULTS

**Socio-demographic characteristics of the respondents:** According to Table 1, almost two third, 108(31.20%), of the respondents were between the ages of 35-44 years while majority, 238(70.0%), were married and 278(81.80%) had attained tertiary education. In addition, more than half, 196(57.60%), were civil/public servants and 234(68.80%) lived in areas of less than 5km from the nearest primary health care.

**Awareness and types of services rendered among the respondents:** As shown in Table 2, almost all, 333(97.90%), of the respondents were aware of the existence of primary health care services in the community, with health workers, 168(50.50%), as the source of information for most of them. Furthermore, 227(22.30%) of the respondents were aware of vaccination as a type of service offered in primary health care in the area, while 192(18.80%) listed sphygmomanometer as a type of equipment present in primary health centres in the area, and 223(21.90%) affirmed anti-malaria as a type of basic pharmaceutical present in primary health centre in the area.

Table 1: Socio-Demographic Characteristics of the Respondents

Variable	Frequency	Percentage	Utilisation of PHC
<b>Name of ward</b>			
Sabon Gari Chori	50	14.70	
Sab-Zuro	20	5.90	
Nkumchem	50	14.70	
Fada	50	14.70	
Daddu	50	14.70	
Fai	30	8.80	
Nok	30	8.80	
Sambam	30	8.80	
Nduya	30	8.80	
<b>Age of respondents (in years)</b>			
15-24	62	18.20	
25-34	106	31.20	
35-44	108	31.20	
45-54	58	17.10	
55-64	5	1.50	
65-74	1	0.30	
<b>Marital Status</b>			
Single	90	26.50	
Married	238	70.0	
Divorced/Separated	4	1.20	
Widow/Widower	8	2.40	
<b>Highest level of education</b>			
Primary	2	0.60	
Secondary	56	16.50	
Tertiary	278	81.80	
No formal education	4	1.20	
<b>Occupation</b>			
Unemployed	48	14.10	
Business/Petty trading	29	8.50	*0.000
Civil/public servant	196	57.60	
Artisan	4	1.20	
Student	63	18.50	
<b>Monthly Income</b>			
Less than N5000	102	30.0	
N5000-N10,000	31	9.10	*0.004
N11,000-N20,000	19	5.60	
N21000-N30,000	40	11.80	
N31000 & above	148	43.50	
<b>Distance of house to PHC</b>			
Less than 5km	234	68.80	
5-10km	83	24.40	*0.015
Greater than 10km	23	6.80	

\*P-value

Table 2: Awareness and type of services rendered in PHC

Variable	Frequency	Percentage
<b>Awareness of the existence of primary health care services in the community</b>		
Yes	333	97.90
No	7	2.10
<b>Source of information on existence of primary health care</b>		
Television	28	8.40
Radio	38	11.40
Newspaper	10	3.0
Friends/Relative	51	15.30
Health workers	168	50.50
Church	33	9.90
Community leaders	5	1.50
<b>Type of services offered in PHCs in the area</b>		
Vaccination	227	22.30
General disease checkup	210	20.60
Blood pressure check	206	20.20
Blood group & Genotype	66	6.50
HIV counseling & testing	77	7.50
Malaria prophylactic treatment	65	6.40
Weight monitoring	63	6.20
Breast feeding practice & family planning	51	5.0
Personal hygiene & nutrition education	31	3.0
Cancer screening	8	0.80
Management of chronic diseases	16	1.60
<b>Type of equipments present in PHCs in the area</b>		
Generator	158	15.50
Refrigerator	150	14.70
Sphygmomanometer	192	18.80
Child weighing scale	118	11.60
Thermometer	120	11.80
Bandages	103	10.10
Stethoscope	74	7.30
Disposable syringes & needles	65	6.40
Urine test strip	40	3.90
<b>Type of basic pharmaceuticals &amp; vaccines present in PHCs</b>		
Anti-malaria	223	21.90
Paracetamol	212	20.80
BCG & DPT vaccines	213	20.90
Measles	157	15.40
Pregnancy test kit	132	12.90
Contraceptives	83	8.10

**Level of Utilisation of Primary Health Care Services:** According to Table 3, the majority, 330(97.10%), of the respondents utilized primary health care services with 359(35.20%) affirming

that their main reason for utilizing primary health care services was to monitor the health status of their children, and 175(51.50%) said that the last time they visited a primary health centre was less

than a month. The reasons for the visits to primary health care according to the respondents were immunization, 115(34.30%), malaria treatment, 108(32.20%), and family planning 9(2.70%)

respectively. Figure 2 shows that most of the respondents, 304(89.40%), utilized primary health care services in the study area, while 36(10.60%) utilized primary health care services poorly.

Table 3: Level of utilization of primary health care services

Variable	Frequency	Percentage
<b>Respondents that utilize primary health care service</b>		
Yes	330	97.10
No	10	2.90
<b>Reasons for utilizing PHCs</b>		
To monitor my health	230	22.50
To monitor the health status of my child/children	359	35.20
Antenatal care	250	24.50
Family planning	181	17.70
<b>When last respondents visited PHCs</b>		
Less than a month	175	51.50
1-6 months	99	29.10
More than 6 months	59	17.40
Never	7	2.10
<b>Reasons for the visits to PHCs</b>		
Immunization	115	34.30
Malaria treatment	108	32.20
Family planning	9	2.70
Antenatal	18	5.40
Blood pressure checkup	35	10.40
Treatment of other fever	50	14.90
<b>If you were to decide on a place of treatment, where would you prefer</b>		
Home	97	9.50
Primary health centre	267	26.20
General Hospital	274	26.90
Traditional healers	167	16.40
Private	130	12.70
Prayer house	85	8.30
<b>Reasons for preference of the above place of treatment</b>		
Spouses decision	67	19.70
It is cheap	94	27.60
To confirm with tradition	1	0.30
They attend to me fast	178	52.40

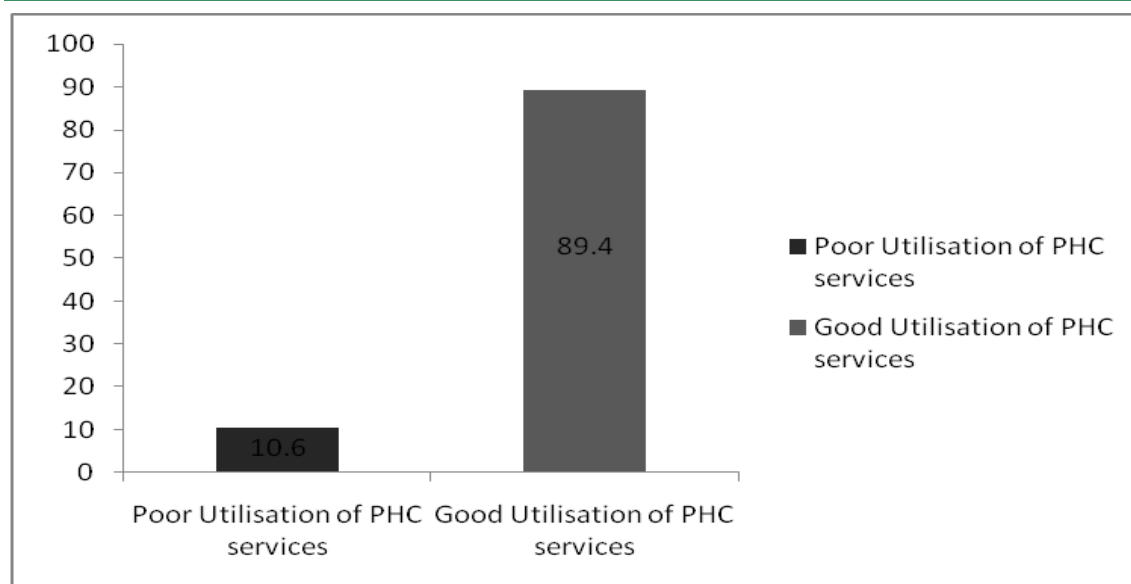
**Level of Satisfaction of Primary Health Care services among respondents:** As shown in Table 4, the majority of the respondents, 293(86.20%), were satisfied with the amount charged for services. Similarly, majority also graded the following services rendered at the primary health

care as satisfactory. These include; vaccination/immunization services 312(91.80%), child care services 31(91.50%), antenatal care services 310(91.20%) and management of chronic diseases 107(31.50%).

Table 4: Level of satisfaction of PHC services

<b>Variable</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Satisfaction with the amount charged for services</b>		
Yes	293	86.20
No	47	13.80
<b>How would you grade the supply of drugs</b>		
Poor	128	37.60
Satisfactory	212	62.40
<b>How would you grade the vaccination/immunization services</b>		
Poor	28	8.20
Satisfactory	312	91.80
<b>How would you grade the treatment modalities</b>		
Poor	75	22.10
Satisfactory	265	77.90
<b>How would you grade the family planning services</b>		
Poor	55	16.20
Satisfactory	285	83.80
<b>How would you grade the management of chronic diseases</b>		
Poor	233	68.50
Satisfactory	107	31.50
<b>How would you grade the dissemination of information on disease &amp; care</b>		
Poor	85	25.0
Satisfactory	255	75.0
<b>How would you grade the services of child care</b>		
Poor	29	8.50
Satisfactory	311	91.50
<b>How would you grade the Antenatal care services</b>		
Poor	30	8.80
Satisfactory	310	91.20
<b>How would you grade the Postnatal care services</b>		
Poor	60	17.60
Satisfactory	280	82.40
<b>How would you grade the delivery services</b>		
Poor	49	14.40
Satisfactory	291	85.60
<b>How would you grade malaria and prophylactic treatment services</b>		
Poor	51	15.0
Satisfactory	289	85.0
<b>How would you grade the services of STI/HIV/AIDS</b>		
Poor	90	26.50
Satisfactory	250	73.50
<b>How would you grade health education services</b>		
Poor	65	19.10
Satisfactory	275	80.90
<b>How would you grade nutritional services</b>		
Poor	129	37.90
Satisfactory	211	62.10
<b>How would you grade referral services</b>		
Poor	133	39.10
Satisfactory	207	60.90





**Figure 2:** Level of utilization of PHC services

**Factors influencing the utilization of PHCs in the study area:** According to Table 5, after adjusting the crude odd ratios multiple logistic regression of the factors influencing utilization of primary health care shows availability of trained staff is one of the major factors influencing the

utilization of primary health care (AOR=1.828 95% CI=0.410-1.672) followed by attitude of staff (AOR=1.114 95% CI=0.527-2.355), waiting times at the health centre (AOR=1.110 95% CI=0.584-2.224) and distance from the facility (AOR=1.053 95% CI=0.526-2.110).

**Table 5:** Factors that influence the utilization of PHCs in the study area

Factors	COR	AOR	95% CI	
			Upper	Lower
Availability of drug supply	0.846	0.535	0.267	1.072
Availability of other essential supplies	0.838	0.515	0.257	1.031
Treatment modalities	1.253	0.778	0.358	1.691
Availability of staff	0.422	0.355	0.176	0.719
Attitude of staff	2.021	1.114	0.527	2.355
Availability of equipment	0.705	0.548	0.272	1.104
Availability of diagnostic services	2.086	0.951	0.472	1.918
Information on diseases & care	0.435	0.475	0.233	0.967
Information on facility management	0.926	0.950	0.770	1.171
Waiting times	1.269	1.110	0.584	2.224
Availability of trained personnel	1.252	1.828	0.410	1.672
Distance from facility	1.062	1.053	0.526	2.110
Cost of drugs & treatment	0.315	0.331	0.164	0.668
Poor referral system	0.917	0.743	0.369	1.496

COR: Crude Odds Ratio, AOR: Adjusted Odds Ratio, CI: Confidence Interval

## DISCUSSION

According to the findings, socio-demographic characteristics of the respondents showed that more were between the ages of 35-44 years, and the majority were also married. This finding is different from a study conducted in South Africa where the majority of the respondents were above 45 years of age (6). However, the finding is similar with a study conducted in Southeastern Nigeria (10). In addition, the majority were educated and civil servants. This finding is also different from the study in Southeastern Nigeria where the majority were small scale traders, artisans and business men and women (10).

According to the findings from this study, the majority of the respondents were aware of the existence of primary health care services in the community, with their source of information being health workers, friends/relatives and radio programmes. This finding might be attributed to the educational level of the respondents who, due to their exposure, will always want to seek information about their health from health workers and the mass media. This finding is similar with a study conducted in Southwestern Nigeria where respondents demonstrated awareness of primary health care facilities in their respective communities (11).

The *ward minimum health care package*, as defined in 2007, includes maternal and child care. Consequently, according to the study, the type of services rendered in the study area include, among others, vaccination, general disease check-up and blood pressure check-up. This finding is similar with the World Bank survey of primary health care in four states of Nigeria where child care was available in most facilities in all the four states of Bauchi, Cross-River, Kaduna and Lagos states (5). This finding is also similar with the study in Southeastern Nigeria where immunization and treatment of ailments were the two most provided services rendered (10). Although treatment of chronic diseases has been included as part of the ward minimum health care package, treatment of chronic diseases is still poor despite the increasing trend of chronic diseases in Nigeria. Similarly, general health education, HIV counseling and testing, nutritional services and malaria treatment

are still poor. This finding is similar with the study in Southeastern Nigeria (10).

Furthermore, the finding shows that the type of equipment present in primary health care in the area includes sphygmomanometer, generator and refrigerator, thermometer, among others. This finding is similar with the World Bank Survey across Primary Health Care facilities in four states in Nigeria (5). In addition, according to the finding, the basic pharmaceuticals and vaccines present in the selected primary health care facilities in the study area includes anti-malaria, paracetamol, BCG and DPT vaccines, measles among others. This is also similar to the World Bank study (5).

The findings show that many of the respondents utilized primary health care services, majorly because they want to monitor their health and that of their children. This finding is, however, lower than previous studies (4,11) but similar with the study carried out in South Africa where over 70% of the respondents utilized health care services (6). However, it is not surprising that most of the respondents patronized primary health care services because of immunisation and malaria treatment. These two conditions have been shown to cause both maternal and infant morbidity and mortality in Nigeria (5).

Furthermore, affordability of services offered at health institutions in Nigeria has been shown to influence the choice of services utilized (12). Therefore, it is not surprising that most of the respondents with higher income actually patronized the health services. In addition, the more educated civil servants and students utilized the services more than the other category of respondents. This finding is in line with the findings of Awusi et al. (13), who concluded that women with more education and income-yielding occupations tended to utilise antenatal care services.

The study showed overall satisfaction with the services offered at the primary health care centres studied. This finding is different from the World Bank study of primary health care centres in four states in Nigeria. In that study, Bauchi and Kaduna residents were the least satisfied states with availability of equipment, supply of drugs

and waiting times, among others (5). This finding is similar with the study in South Africa where the majority of the respondents were satisfied with the services offered at the facilities (6).

Factors influencing the utilization of primary health care services after adjusting the crude odd ratios shows that availability of trained staff, attitude of staff, waiting times at the health centre and distance from the health facility were the major factors. This finding is similar to previous studies (14,15).

The awareness of the existence of primary health care services in communities in the study area shows the improvements that have been recorded in the drive to make health care services available to all part of the country especially the Northern part where health challenges is still prevalent. Similarly, the type of services offered at the studied facilities also shows the integration of more services into the national primary health care system as part of the implementation of the ward minimum health care package. However, the study found that treatment of chronic diseases was poor. Therefore, the Government and stakeholders will need to pay more attention to that in order to tackle the challenges of the increasing rate of chronic diseases across the country, since primary health care is the first level of care and closer to the people. The study also showed the high level of utilization of health services which is commendable, but it should be sustained, and the various factors stated as influencing the utilization of primary health care services should be monitored and the outcome used to improve the services at the primary health level by the relevant stakeholders.

In conclusion, the study highlighted the weaknesses in some of the services offered at the various primary health centres such as treatment and management of chronic diseases, cancer screening, personal hygiene and nutrition education. The study also highlighted factors which can hinder the residents from patronizing primary health care services. Therefore, the National, State and Local Primary Health Care Development Agencies and other stakeholders in the Ministry of Health should collaborate to ensure the services at primary health care facilities

are optimum. Special focus should be given to services related to the treatment and management of chronic diseases. In addition, more equipment for the running of such services should be provided and upgraded regularly.

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