

Assessment of Quality of Care in a Primary Health Care Setting in South West Nigeria

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ABSTRACT

Introduction: Poor quality of health care service results in 60% of deaths from conditions requiring healthcare in low and middle income countries and it imposes significant costs each year in lost productivity. This study was carried out to assess the quality of health care at Primary Health-Care Centre, Atelewo, Nigeria

Methods: The cross-sectional design was utilized for the study. Data was collected from patients receiving health care services at PHC Atelewo and health care workers attending to patients in the facility using semi-structured questionnaire

Results: Our study revealed that 56.6% of patient respondents believe that the single most important motivating factor for utilizing the PHC services was good attitude of health workers. 75.4% of patient respondents strongly agreed that health workers. Only 68.9% of Patient Respondent strongly agreed that nurses are inadequate in number while 63.9% of Patient Respondent strongly agreed that Health workers are competent. 82.8% of patient respondents strongly agreed that they were satisfied with waiting time while 85.2% were satisfied with treatment and care received.

Conclusion: The health care provided at Primary Health Care Centre, Atelewo is of moderately good quality and therefore requires enhancement of a few areas of service to improve quality of care. Good attitude of health worker is perceived to be more important than quality of care in the uptake of services. Health workers should therefore be sensitized on the need to provide patient centred care to increase service utilization and quality

Keywords: Primary Health Care, Quality of Care, Patient-centred care, good attitude of health workers, Accessibility, Availability

INTRODUCTION

Background

In 1978, an International Conference on Primary Health Care (PHC) was held at Alma Ata, where PHC was adopted as the strategy to achieve Health for All by 2000 [1]. PHC was adopted in Nigeria in 1998 through the National Health Policy and Strategy to Achieve Health for All Nigerians which was the first National Health Policy [2]. In 1992 the National Primary Health Care Development Agency was established to capitalize on the remarkable and innovative progress made in

the development of PHC between 1986 and 1992 [3]. Between 2004 and 2010 the second National Health Policy [4] and the first National Strategic Health Development Plan [5] were developed to strengthen the PHC system. In 2011 the PHC under One Roof (PHCUOR) policy, was launched to reduce fragmentation in the delivery of PHC services [6]. Between 2014 to 2018 the National Health Act was passed [7], the third and current National Health Policy was launched [8], the Second National Strategic Health Development Plan was launched to ensure universal access to comprehensive

health care [9] and the Federal Government of Nigeria kicked off a scheme in Abuja, titled 'Revitalization of Primary Healthcare Centers (PHC) for Universal Health Coverage' to revitalize over 10,000 PHCs across the country [10].

In 2016, Osun State enacted the Osun State Primary Health Care Development Board Law [11] which established the Osun State Primary Health Care Development Board (under which 843 primary health care centres were domiciled) to coordinate, plan, fund and monitor all primary health care services in the state under The same year Osun State commenced implementation of the Saving One Million Lives Program for Result [12] to increase the utilization and quality of high impact reproductive, child health, and nutrition interventions through activities which included revitalization of 332 Primary Health Care Centres (1 per Ward) and in 2019 Osun State along with, Niger, and Abia States were selected as Pilot states for the Basic Health Care Provision Fund [13]

Over the last decade the trend in primary health care did not show good progress in Nigeria and Osun State. In Osun State, under-five mortality increased from 56 per 1,000 in 2011 to 101 per 1,000 in 2017 while Infant Mortality increased from 40 per 1,000 to 78 per 1,000 during the same period. Also, Stunting increased from 22% in 2011 to 23.5% in 2017. In addition there was decline in the coverage of health service delivery with DPT coverage for 3 doses reducing from 86.3% in 2011 to 60% in 2017. Also, breastfeeding declined from 99.1% in 2011 to 94.3% in 2017, Skilled Birth delivery declined from 97.2% in 2011 to 84.7% in 2017, Antenatal Care Attendance reduced from 97.2% in 2011 to 90.9% in 2017 while Contraceptive Prevalence Rate reduced from 27% in 2011 to 22.9% in 2017 [14,15]

The study was conducted to assess the quality of primary health care to improve the health outcomes and health service utilization in Osun State. Sixty

percent of deaths in low-and-middle-income countries (LMICs) from conditions requiring healthcare, occur due to poor quality of care, whereas the remaining deaths result from non-utilization (poor coverage) of the health system. Inadequate quality of care imposes costs of US\$ 1.4–1.6 trillion each year in lost productivity in LMICs [16]. The findings from this study will shed more light on the quality of primary health care services, identify the factors responsible for poor quality and help to make recommendations for improvement of quality of primary health care service delivery resulting in better health outcomes in Osun State

Aim and Objectives

The Aim of this study is to assess the quality of health care service at Primary Health-Care Centre, Atelewo

The objectives of this study are:

- To assess patients' awareness of services available at PHC Atelewo
- To identify the motivating factors for patients' utilization of PHC Atelewo
- To assess patients' perception of accessibility to and availability of services at PHC Atelewo
- To assess patients' perception of adequacy & competency of health care workers at PHC Atelewo
- To assess patients' perception of patient centred care practiced at PHC Atelewo
- To assess patients' perception of satisfaction with Health Service Delivery at PHC Atelewo
- To assess health workers' experience of Health Service Delivery at PHC Atelewo
- To determine association between Quality of Care and determinants of quality of care

Research Questions

The Research Questions for this study are:

What is level of patients' awareness of services available at PHC Atelewo?

What are the motivating factors for patients' utilization of PHC Atelewo?

What is level of patients' perception of accessibility to and availability of services at PHC Atelewo?

What is the level of patients' perception of adequacy & competency of Health Care Workers at PHC Atelewo?

What is the level patients' perception of patient centred care practiced at PHC Atelewo?

What is the level patients' perception of satisfaction with Health Service Delivery at PHC Atelewo?

What is the level of Health Care Workers' experience of Health Service Delivery at PHC Atelewo?

What are the magnitudes of association between Quality of Care and determinants of Quality of Care

LITERATURE REVIEW

There are several models adopted by researchers for assessing quality of care. The first model is the Donabedian model [17] which identifies three domains in which health care quality can be assessed comprising of structure, process, and outcomes. Structure refers to stable, material characteristics (infrastructure, tools, technology) and the resources of the organizations that provide care and the financing of care (levels of funding, staffing, payment schemes and incentives). Process refers to the interaction between caregivers and patients during which structural inputs from the health care systems are transformed into health outcome. Outcomes can be measured in terms of health status, deaths, or disability-adjusted life years (a measure that encompasses the morbidity and mortality of patients or groups of patients). Outcomes also include patient satisfaction or patient responsiveness to the health care system

The second model is the SERVIQUAL model, a modification of the Donabedian model by Parasuraman et al [18]. This model categorized client perspective of the dimensions of service quality into five

generic domains: tangibles (physical facilities, equipment, and appearance of personnel); reliability (ability to perform the promised service dependably and accurately); responsiveness (willingness to help customers and provide prompt services), assurance (knowledge and courtesy of employees and their ability to inspire trust and confidence) and empathy (caring individualized attention the firm provides its customers)

The third model also referred to as the six-domain model was released by the Institute of Medicine [19]. It consists of six elements of quality of care comprising of Patient Safety (Are the risks of injury minimal for patients in the health system?), Effectiveness (Is the care provided scientifically sound and neither underused nor overused?), Patient centeredness (Is patient care being provided in a way that is respectful and responsive to a patient's preferences, needs, and values and are patient values guiding clinical decisions?), Timeliness (Are delays and waiting times minimized?), Efficiency (Is waste of equipment, supplies, ideas, and energy minimized?) and Equity (Is care consistent across gender, ethnic, geographic, and socioeconomic lines?)

This study utilized a combination of important aspects of these three models to assess the quality of primary health care services in PHC Atelewo.

In the area of client centredness, a study [20] conducted in Cross Rivers State reported low level of client centredness. Thirty-Eight percent were satisfied with the attitude of staff, 41% were satisfied with the way their right to information was respected, 82% were satisfied about how their right to access services was respected and 36% were satisfied with how their right to dignity was respected. In contrast another study [21] in Rivers State reported high level of client centred service. Ninety-Three percent reported that Nurses treated them with courtesy 92% reported that Nurses explained things clearly, 89.5% reported that Doctors treated them with courtesy, and

94.7% reported that Doctors explained things clearly. This was similar to another study [22] in Lagos reported high proportion (91.2%) of respondents with good staff attitude and only 8% reporting pompous/rude Staff attitude

In terms of waiting time and time spent by care provider, the study [20] in Cross Rivers reported that 49% of clients were satisfied with waiting time and 37.3% were satisfied with the length of time the health care provider spent with children during service delivery. This was similar to the findings in the study in Lagos [22] with only 44.5% reporting short waiting time. This was in contrast with the study in Rivers State [21] which reported 85.8% perceiving that consulting time was enough

In terms of hospital facilities and environment, the study in Cross Rivers State [20] reported only 48.2% that were satisfied with the cleanliness of the facility environment while a similar study [23] in Kwara State reported 78.3% with negative perception of Hospital premises and employees. In contrast, Ogaji et al [21] showed that 93.1% reported clean outpatient department and 68.7% reported clean bathroom while the study by Akinyinka et al [22] reported 97.8% perceiving the PHC environment to be clean while 97.8% reported clean toilets

In the area of service delivery area, Udonwa et al [20] reported 39% satisfied with the comfort of the service delivery environment similar to 48.2% perceiving good comfort of waiting area reported in the study Akinyinka et al [22]

In terms of service accessibility, quality of services, competence of staff, availability of drugs and cost of service, the study by Mohammed et al [23] reported only low proportion (39%) with positive perception of quality of diagnostic services, low proportion (11.1%) with positive perception of quality of admission services, low proportion (27.1%) with low proportion positive perception of quality of services from Medical Doctor and (14%) with positive perception of quality of services

from Nurses. A similar study [24] reported high proportion (75.7%) perceiving PHCs were readily accessible but low proportion (26.6%) perceiving PHC workers had adequate technical skills. The study by Ogaji et al [21] reported that 60.6% were given drugs at facility, 64.1% experienced drug availability at facility while only 17.7% reported that outpatient was too expensive. In contrast, Akinyinka et al [22] reported 89.8% experiencing confidence in Health Care Providers skills, 54.7% experienced cheap Cost of drugs and 60.6% reported Cheap Cost of services.

In terms of quality of care and patient satisfaction with care, the study by Udonwa et al [20] reported 67.2% who were satisfied with treatment for malaria, Egbewale et al [24] reported 79.3% were satisfied with the quality of services rendered, Ogaji et al [21] reported 67.5% were satisfied with the care they received and Akinyinka et al [22] 94.9% perceived effective treatment while 92.7% reported Satisfaction

In summary it can be deduced that the studies showed varying degree of perception of quality of care ranging from low to high levels quality of care for different primary health care services. It is therefore very important to assess the quality of care to identify the factors responsible for low quality so as to address these factors or in the case of high quality to ensure maintenance of the factors responsible.

MATERIAL AND METHOD

Research Design

This study utilized the Descriptive Cross-Sectional Study Design to assess the quality of Health Care Services as perceived by patients and the experience of health workers at PHC Atelewo in Olorunda LGA of Osun State, Nigeria.

Study Participants

The Eligibility Criteria for study participants were the following:

1. Males and Females patients that have utilized PHC Atelewo in the past, at least twice
2. Health Care Workers who have worked for more than one year in the facility

Study Setting

The study was carried out in Olorunda Local Government Areas of Osun State, under the State Primary Health Care Development Board. Olorunda LGA is divided into 9 wards- Ward 2, Ward 9, Ward 11, Ward 3, Ward 1, Ward 10, Ward 8, Ward 4 and Ward 6.

Osun State was created from the old Oyo State on the 27th of August, 1991, covering a total landmass of about 12,820 square kilometers, located within latitude 6.55⁰ and 8.10⁰ North and longitude 3.55⁰ and 5.05⁰ East, bounded by Ogun State to the South, Kwara State to the North, Oyo State to the West and Ekiti and Ondo State to the East and has a projected 2016 population of 4,705,600 according to the National Bureau of Statistics

Osun State is divided into three federal senatorial districts, each of which is composed of two administrative zones. It consists of thirty Local Government Areas and Area Office and there are over 200 major towns and several villages in the state. It is situated within the cocoa belt of South-western Nigeria, though there are patches of savannah in the Northern part of the State, much of the State areas are still under tropical rain forest vegetation type. Minerals resources found in the state include gold and kaolin. It is also blessed with presence of many rivers and streams which serves the water needs of the state with the state's name derived from the Osun River. The people of Osun are predominantly Yorubas, although there are also people from other parts of Nigeria. The language is Yoruba but there are variations in intonation and accent in and across the towns and cities. Osun is culturally rich and this can be seen in all spheres of life such as arts, literature, music and other social activities in the state. The people are mostly

farmers, producing such food crops as yam, maize, cassava; beans and cocoyam with cash crops grown including tobacco and palm produce [25]

Procedure for Data Collection

Data was collected from patients receiving or who have received health care services at PHC Atelewo and Health Care Workers attending to patients in the facility using well-structured questionnaire

Sample Size

The sample size was estimated using the Cochran formula for cross-sectional studies below

$$n = \frac{z^2 \times p \times q}{d^2}$$

Where n=sample size

z= level of significance

p= Prevalence of attribute in the population

d=precision

p=proportion of 79.4% satisfied with quality of services=79.4% [24]

p=0.794

q=1-p

q= 1-0.794

q= 0.206

z=1.96 (5% significance)

if d=7.5% (precision)

$$n = \frac{0.794 \times 0.206 \times 1.96 \times 1.96}{0.07 \times 0.07} = \frac{0.6283}{0.0049}$$

n=128

Minimum sample size is 128

Sampling Method

Multistage Sampling Method was utilized for this study. In the first stage, one Ward out of 9 Wards (Ward 2, Ward 9, Ward 11, Ward 3, Ward 1, Ward 10, Ward 8, Ward 4 and Ward 6) in Olorunda LGA was chosen by random sampling culminating in selection of Ward 4

In the second stage, One Primary Health Centre in Ward 4 out of two (Atelewo Primary Health Centre, Atelowo and Enikanoyun Health Post, Enikan-Oyun) was also chosen by random sampling with

Atelewo Primary Health Centre culminating (ii). in selection of PHC Atelowo. In the third(iii). stage 111 patient respondents were selected purposively and 22 health worker(iv). respondents were selected from the health facility purposively making a total of 132 (v). respondents

Variable

The input variables were Sociodemographic characteristics of Age, Gender, Marital Status, Educational Status, Income & while output variables were respondent's perception of health care services

Development & Validation of Data

Collection Instrument

The study utilized two questionnaires as data collection instrument (one for data collection from patients and the other for collection of data from health workers). The designed instrument combined important aspects of the three models of Donabedian, SERVIQUAL and Institute of Medicine usually utilized to assess quality [17-19]. The questionnaire was semi-structured containing closed and open-ended interviewer administered questions. The patient respondent questionnaire contained four sections and 17 questions. Section-A collected data on Socio-demographic Characteristics, Section-B collected data on Availability of Services, Section-C collected data on Utilization of Services and Section-D collected data on Perception of Quality of Care. The health worker questionnaire contained four sections and 24 questions. Section-A collected data on Socio-Demographic Characteristics, Section-B collected data on Availability of Services, Section-C collected data on Utilization of Services, and Section-D collected data on Perceived Quality of Care Rendered.

Statistical Analysis

SPSS Version 21.0 Package was utilized to compute the following:

- (i). Simple descriptive statistics of respondents

- Frequency distribution of respondents
- Frequency distribution of awareness of types of health care services
- Frequency distribution of indicators of perception of quality of health care
- Association between perception of quality and socioeconomic determinants using Chi Squared Test
- Association between perception of quality and services utilization using Chi Squared Test

Ethical Consideration

Ethical approval for this study was obtained from Ethical Review Board of the Osun State Agency for Control of AIDS

RESULT

3.1 Sociodemographic Characteristics of Patients Respondent

Majority (45.9%) patient respondents were in Age Group 25-31 years, 23% were in Age Group 31-18-24 years and 3.6% in Age Group 44-56 years.

Majority (89.3%) of respondents were females compared to males (10.7%). More Muslims (63.9%) compared to Christians (36.1%) were respondents. Majority of patient respondents were Yorubas (94.3%) followed by Igbos (4.1%) and Hausa (1.6%). 86.1% of patient respondents were married while 12.3% were Single and 0.8% Widows. Most (55.7%) of patient respondents had Secondary Education, 30.3% had Tertiary Education and 10.7% had no formal education, 3.3% had Primary Education. 59% of patient respondents had Monthly Income below N30, 000, 24.6% had Monthly Income between N31, 000-N50,000, 9% had Monthly Income between N51,000-N100,000, 3.3% had Monthly Income over N150,000 and 4.1% had Monthly Income between N101,000 to N150,000. Majority (89.3%) spend less than or equal to N10,000 monthly while 7.4% spend between N11,000-N20,000 monthly on Health while 3.3% of respondents spend N21,000-N30,000 monthly on Health. (Table 1)

TABLE 1: Sociodemographic Characteristics of Patient Respondents

Characteristics	Categories	Frequency	Percent
Age	18-30 years	81	66.4
	31-43 years	35	28.7
	44-56 years	6	4.9
	Total	122	100.0
Gender	Female	109	89.3
	Male	13	10.7
	Total	122	100.0
Religion	Christianity	44	36.1
	Islam	78	63.9
	Total	122	100.0
Ethnic Region	Hausa	2	1.6
	Igbo	5	4.1
	Yoruba	115	94.3
	Total	122	100.0
Marital Status	Married	105	86.1
	Separated	1	0.8
	Single	15	12.3
	Widow	1	0.8
	Total	122	100.0
Educational Level	No Formal Education	13	10.7
	Primary	4	3.3
	Secondary	68	55.7
	Tertiary	37	30.3
	Total	122	100.0
Monthly Income	<=N30,000	72	59.0
	N31,000-N50,000	30	24.6
	N51,000-N100,000	11	9.0
	N101,000-N150,000	5	4.1
	>N150,000	4	3.3
	Total	122	100.0
Monthly health Expenditure	<=N10,000	109	89.3
	N11,000-N20,000	9	7.4
	N21,000-N30,000	4	3.3
	Total	122	100.0

3.2 Sociodemographic Characteristics of Health Workers Respondent

Majority (63.6%) of Health Workers Respondents were in Age Group 30-36 years, 9.1% in Age Group 37-42 years and 27.3% in Age Group 42-48 years. Majority of Health Workers Respondents were Females (90.9%), 63.6% of Health Workers Respondents were Christians while 36.4% were Muslims.

All Health Workers Respondents were Yorubas 72.7% of Health Workers Respondents were married while 27.3% were Single. All Health Workers Respondents reached Tertiary level of Education.

Majority of Health Care were 36.4% were Health Assistant (36.4%), of Health Workers Respondents were Nurses/

Midwife (27.3%), 18.2% were CHEW, 9.1% were Medical Laboratory Technician while, 9.1% were Volunteer.

9.1% of Health Workers Respondents had Monthly Income of less than or equal to N30,000, 36.4% had Monthly Income of N31,000-N50,000 and 54.5% had Monthly Income of N150,000.

81.8% of Health Workers Respondents spent less than N10,000 on Monthly, Health Expenditure, 9.1% spent N21,000-N30,000 Monthly Health Expenditure and 9.1% spent N41,000-N50,000 on Monthly Health Expenditure. (Table 2)

TABLE 2: Sociodemographic Characteristics of Health Worker Respondents

Characteristics	Category	Frequency	Percent
Age	1	7	63.6
	2	1	9.1
	3	3	27.3
	Total	11	100.0
Sex	Female	10	90.9
	Male	1	9.1
	Total	11	100.0
Religion	Christianity	7	63.6
	Islam	4	36.4
	Total	11	100.0
Ethnicity	Yoruba	11	100.0
Marital Status	Married	8	72.7
	Single	3	27.3
	Total	11	100.0
Education	Tertiary	11	100.0
Cadre	Nurses/Midwife	3	27.3
	CHEW	2	18.2
	Health Assistant	4	36.4
	Volunteer	1	9.1
	Medical Laboratory Technician	1	9.1
	Total	11	100.0
Monthly Income	<=30,000	1	9.1
	31,000-50,000	4	36.4
	>150,000	6	54.5
	Total	11	100.0
Monthly Health Expenditure	<=N10,000	9	81.8
	N11,000-N20,000	1	9.1
	N21,000-N30,000	1	9.1
	Total	11	100.0

3.3 Awareness of Services available at Health Facility

Majority (99.2%) of respondents were aware of availability of Immunization Services, followed by 98.4% that are aware of Communicable disease control, 98.4% were aware of Health Education/Community Mobilization and maternal new

born care services. 96.7% were aware of Non Communicable Disease control services, 95.9 were aware of Child Care services and 91.6% were aware of Nutrition Services (Table 3)

TABLE 3: Perception of awareness of Services available at Health Facility

HEALTH SERVICES	Frequency	Percent
Communicable disease control	120	98.4
Child survival	117	95.9
Maternal newborn care	120	98.4
Nutrition	111	91.0
Non communicable disease prevention	118	96.7
Health education community Mobilization	120	98.4
Immunization	121	99.2

3.4 Motivating Factors for Service utilization

Majority (56.6 %) of patient respondents believe that the single most important motivating factor for utilizing the PHC services was Good Attitude of Health Workers followed by Quality of Service (10.7%) Affordability of Health Care Service (6.6%), Accessibility (5.7%), and motivated by Affordability of Health Care Service, 0.8% were motivated by Availability of Health Workers (Figure 1).

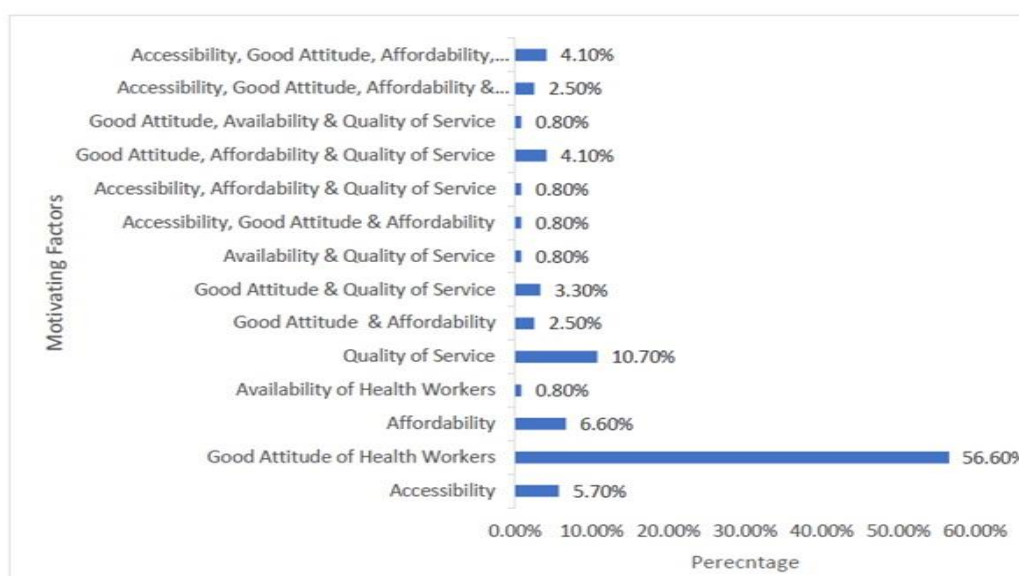


Figure 1: Motivating Factors influencing use of Services

3.5 Practice of Person Centred care

Seventy-Five percent (75.4%) of patient respondents strongly agreed that health workers were respectful to them while 83.6% of health worker Respondents strongly agreed that health workers showed empathy, compassion & support, 78.7%

reported that Health Workers offered seat and made them feel relaxed and 72.7% of health worker respondents strongly agree that patients are shown empathy, compassion and support in the health facility (Table 4)

Table 4: Perception of practice of Person Centred care

PERSON CENTRED CARE	SA	A	N	D	SD
Health Workers exchanged greetings with me	80.3% (98)	19.7% (24)	0	0	0
Health Workers offered seat and made me feel relax	78.7% (96)	18.9% (23)	1.6% (2)	0	0.8% (1)
Health Workers respectful	75.4% (92)	24.6% (30)	0	0	0
Health Workers showed empathy compassion support	83.6% (102)	16.4% (20)	0	0	0
Health Workers friendly	76.2% (93)	23.8% (29)	0	0	0

3.6 Accessibility, availability and affordability of services

Eighty-Three (82.8%) of Patient Respondents strongly agreed that PHC Atelewo is physically accessible. 74.6% of

patient respondents strongly agreed that medical equipments are adequate, 72.1% of strongly agreed that perceived drugs are available and 85.2% strongly agreed that the cost of health services is affordable and

82% perceived that PPE materials available while 45.5% of health workers respondents

strongly that drugs are available at the health facility (Table 5)

Table 5: Perception of accessibility, availability and affordability of services

ACCESSIBILITY, AVAILABILITY & AFFORDABILITY OF SERVICES	SA	A	N	D	SD
Health Facility is physically accessible	82.8% (101)	12.3% (15)	2.5% (3)	1.6% (2)	0.8% (1)
Drugs is available in the Health Facility	72.1% (88)	21.3% (26)	1.6% (2)	3.3% (4)	1.6% (2)
Payment arrangements optimal	82% (100)	13.1% (16)	2.5% (3)	0.8% (1)	1.6% (2)
PPE materials available	82% (100)	16.4% (20)	1.6% (2)	0	0
Medical equipments are adequate	74.6% (21)	13.1% (16)	2.5% (3)	5.7% (7)	4.1% (5)
Cost of health services is affordable	85.2% (104)	12.3% (15)	0.8% (1)	1.6% (2)	0

3.7 Adequacy & effectiveness of Health Workers

Sixty-Nine per cent (68.9%) Patient Respondent strongly agreed that Nurses workers are adequate in number while 73.8% of Patient Respondent strongly agreed other health workers are adequate in

number respectively. About 63.9% of Patient Respondent strongly agreed that Health workers are competent while 77.9% strongly agree that they had good cure and recovery and 83.6% strongly agreed that they were given adequate information on drug usage (Table 6)

Table 6: Perceived adequacy & effectiveness of Health Workers

HEALTH WORKERS ADEQUACY & EFFECTIVENESS	SA	A	N	D	SD
Doctors are adequate in number	63.9% (78)	14.8% (18)	3.3% (4)	3.3% (4)	14.8% (18)
Nurses are adequate in number	68.9% (84)	19.7% (24)	1.6% (2)	3.3% (4)	6.6% (8)
Other health workers are Adequate in number	73.8% (90)	14.8% (18)	2.5% (3)	4.1% (5)	4.95% (6)
Health Workers are competent	79.5% (97)	20.5% (25)	0	0	0
I had good cure and recovery	77.9% (95)	20.5% (25)	0.8% (1)	0.8% (1)	0

3.8 Satisfaction with service delivery

Eighty-Three (82.8%) of patient respondents strongly agreed that they were satisfied with waiting time, 85.2% of patient respondent strongly agreed that they were satisfied with treatment and care received

and 82.8% motivated to continue seeking healthcare while 72.7% of health workers respondents strongly that patient are satisfied with treatment and care provided in the health facility (Table 7)

Table 7: Patients' perception of satisfaction with service delivery

SATISFACTION WITH SERVICE DELIVERY	SA	A	N	D	SD
Satisfied with time spent with care provider	79.5% (97)	19.7% (24)	0.8% (1)	0	0
Satisfied with treatment and Care received	85.2% (104)	14.8% (18)	0	0	0
Satisfied with waiting time	82.8% (101)	14.8% (18)	0.8% (1)	1.6% (2)	
Satisfied with prescription of drugs	82% (100)	17.2% (21)	0.8% (1)	0	0
I am motivated to continue seeking healthcare	82.8% (101)	17.2% (21)	0	0	0

3.9 Perception of availability of good infrastructure & environment

Seventy-Nine percent (78.7%) of Patient Respondents strongly agreed that there is Good building standard, 84.4% of Patient Respondents strongly agreed that there is Portable water, 83.6 strongly agreed that there is Toilet facility, 82% strongly

agree that the environment is hygienic, 78.7% strongly agree that consulting room has enough privacy and 71.3% strongly agree that the waiting area is comfortable While 54.5% of health workers respondents strongly agree that there are adequate number of room in the health facility (Table 8)

Table 8: Perception of availability of good infrastructure & environment

INFRASTRUCTURE & ENVIRONMENT	SA	A	N	D	SD
Good building standard	78.7% (96)	16.4% (20)	0.8% (1)	2.5% (3)	1.6% (2)
Environment hygienic	82% (100)	18% (22)	0	0	0
Portable water available	84.4% (103)	14.8% (18)	0	0	0.8% (1)
Toilet facility available	83.6% (102)	14.8% (18)	0.8 (1)	0	0.8 (1)
Consulting room has enough privacy	78.7% (96)	20.5% (25)	0.8% (1)	0	0
Waiting area is comfortable	71.3% (87)	23% (28)	0.8% (1)	0	4.9% (6)

3.10 Health Workers experience of health care service delivery

Seventy-Three percent (72.7%) of Health Workers strongly believe that Health care Workers showed Empathy Compassion & Support, 81.8% strongly believe that they

ensured Good Clinical Examination, 54.5% strongly believe that Rooms Adequate in Number, 45.5% strongly believe that Drugs are available and 72.7% strongly believe Patients are satisfied With Treatment and Care (Table 9)

Table 9: Health Workers experience of health care service delivery

HEALTH WORKERS' EXPERIENCE	SA	A	N	D	SD
Showed Empathy Compassion & Support	72.7% (8)	18.2% (2)	0	0	9.1% (1)
Ensured Good Clinical Examination	81.8% (9)	18.2% (2)	0	0	0
Rooms Adequate in Number	54.5% (6)	36.4% (4)	9.1% (1)	0	0
Available Drugs	45.5% (5)	27.3% (3)	0	0	0
Patient Satisfied With Treatment and Care	72.7% (8)	27.3% (3)	0	0	0

3.11 Overall Quality of Care

Overall quality of care was determined by looking at the frequency distribution of respondents that answered strongly agreed to the 1 important variable each in five areas utilized to measure quality of care (perception of awareness of available services, perception of practice of person centred care, perception of accessibility, availability and affordability

of services, perceived adequacy & effectiveness of Health Workers, patients' perception of satisfaction with service delivery and perception of availability of good infrastructure & environment) The overall quality of care is moderately good based on the fact that perception on all the variables are above 70% (72.1%-82%) except for adequacy of staff: Adequacy of Nurses-68.9%(Figure 2)

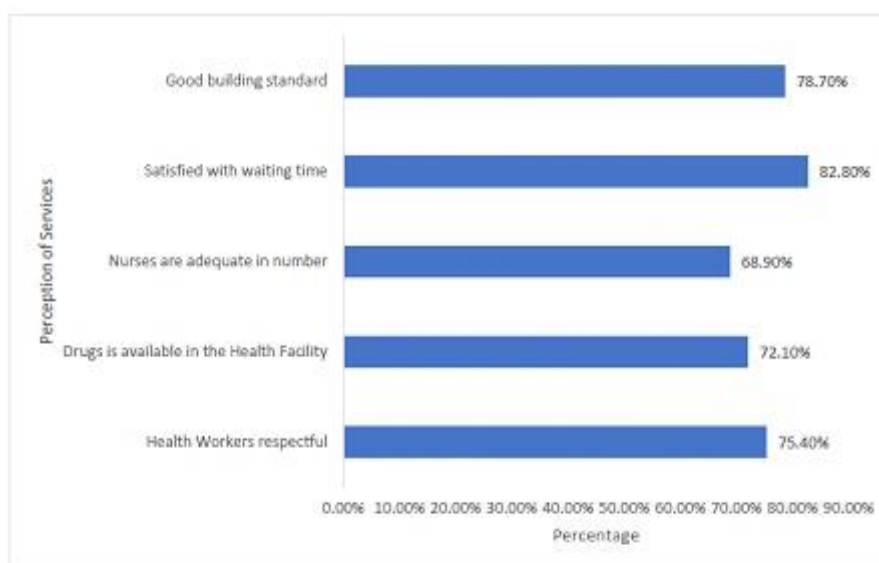


Figure 2: Overall Quality of Care

3.12 Sociodemographic Determinants of Treatment and care Satisfaction

Educational level was statistically significantly associated with treatment & Care Satisfaction (p value=0.04) with those with higher levels of education more likely to be satisfied with treatment & care

compared to those with lower level of education.

Age (p value=0.075), Gender (p value =0.45), Marital Status (p value=0.12), Ethnicity (p value =0.42), Religion (p value =0.74) and Income (p value =0.52) were not statistically significantly associated with treatment & Care Satisfaction (Table 10)

Table 10: Sociodemographic determinants of Satisfaction with treatment & care

Socio-Demographic Characteristics	Categories	Strongly Agree there is satisfaction with treatment and care received	Agree there is satisfaction with treatment and care received	Strength of Association (p-value)
Age Group	18-30 years	72	9	0.179
	31-43 years	27	8	
	44-56 years	5	1	
Gender	Female	93	16	0.605
	Male	11	2	
Religion	Christianity	34	10	0.57
	Islam	70	8	
Ethnicity	Hausa	2	0	0.683
	Igbo	4	1	
	Yoruba	98	17	
Marital Status	Married	90	15	0.310
	Single	13	2	
	Widow	0	1	
	Separated	1	0	
Educational Level	No Formal Education	10	3	0.044
	Primary	3	1	
	Secondary	63	5	
	Tertiary	28	9	
Monthly Income	<=N30,000	64	8	0.178
	N31,000-N50,000	24	6	
	N51,000-N100,000	10	1	
	N101,000-N150,000	4	1	
	=>N150,000	2	2	

3.12 Association between Treatment Satisfaction and Perception of Service

Table 11: Association between Treatment Satisfaction and Perception of Service Delivery

service perception	categories	Strongly agree satisfied with treatment and care received	Strongly agree satisfied with treatment and care received	total	p-value
Health Workers are respectful	STRONGLY AGREE	86	18	104	0.000
	AGREE	6	12	18	
	TOTAL	92	30	122	
I am satisfied with waiting time	STRONGLY AGREE	99	2	101	0.000
	AGREE	5	3	18	
	NEUTRAL	0	1	1	
	DISAGREE	0	2	1	
	TOTAL	104	18	122	
Drugs is available	STRONGLY AGREE	84	4	88	0.000
	AGREE	15	11	26	
	NEUTRAL	2	0	2	
	DISAGREE	2	2	4	
	STRONGLY DISAGREE	1	1	2	
	TOTAL	104	18	122	
Building is of good standard	STRONGLY AGREE	88	8	96	0.000
	AGREE	11	9	20	
	NEUTRAL	0	1	1	
	DISAGREE	3	0	3	
	STRONGLY DISAGREE	2	0	2	
	TOTAL	104	18	122	
Nurses are adequate in number	STRONGLY AGREE	81	3	84	0.000
	AGREE	15	9	24	
	NEUTRAL	1	1	2	
	DISAGREE	2	2	4	
	STRONGLY DISAGREE	5	3	8	
	TOTAL	104	18	122	

Good building infrastructure (P=0.000), adequacy number of nurses (P=0.000), availability of drugs (P=0.000), respectfulness of health workers (P=0.007) and satisfaction with waiting time (P=0.000) were all statistically significantly associated with patients satisfaction with treatment and care (Table 11)

DISCUSSION

Majority (99.2%) of respondents were aware of availability of Immunization Services, followed closely by 98.4% that are aware of Communicable disease control, Health Education/ Community Mobilization and maternal new born care services. 96.7% were aware of Non Communicable Disease control services, 95.9% were aware of Child Care services and 91.6% were aware of Nutrition Services. These levels of awareness of PHC services in this study were higher than the findings in a similar study [27] in Oyo State which reported proportion of 69.1% with awareness of Health Education, 52.6% with awareness of Endemic Disease Control, 46.4% with awareness of Immunization, 36.1% with awareness of Maternal and Child Health and 74.2% with awareness of Nutrition. This finding were also higher compared to another study [24] which reported (74.7% with awareness of Health Education and (78.2%) with awareness of Immunization services (78.2%) Majority (56.6%) of patient respondents believe that the single most important motivating factor for utilizing the PHC Atelewo is good attitude of health workers followed by quality of Service (10.7%), affordability of health care service (6.6%), accessibility (5.7%), and availability of health workers (0.8%). This answers the second research question, what is the single most important motivating factor for patients' utilization of PHC Atelewo? Good attitude of health worker is a very significant motivating factor for utilization of PHC reflecting the importance of patient centred care which can be more important than effectiveness and safety in the uptake of services [26]

Majority (79.6% & 74.1%) of respondents strongly agreed that portable water and toilet facilities are available respectively This finding is supported by Osun State Service Availability and Readiness Assessment which shows that 70% of PHCs in Olorunda LGA have constant water supply while only 40% are without functional toilets [28]

Moderate proportions (63.9% & 64.8.9%) of respondent strongly agree that Doctors and Nurses are adequate in number respectively compared to a higher proportion (73.8%) for other Health Workers. This finding is supported by the study conducted on PHCs in Osun State [28] which showed that there is inadequate number of health workers in Osun State especially Doctors and Nurses.

79.5% of Patient Respondent strongly agreed that Health workers are competent which is less than the proportion (84.3%) reported in a similar study [24]

Majority (74.6%) of Patient Respondent strongly agreed that medical equipments were adequate. This is supported by findings of the service availability and readiness assessment conducted in 2018 [28] which revealed that 50% of health facilities in Olorunda LGA have at least 50% of World Health Organization basic equipment.

Majority (72.1%) of patient respondents perceived that drugs are available. This findings is similar to the proportion (60%) reported in another study [22]. A high proportion (85.2%) of respondents strongly agreed that the cost of health care services is affordable. This is higher than the finding (60.6%) reported in the study in Lagos [22].

Majority (75.4%) of patient respondents strongly agreed that health workers were respectful to them, while 83.6% strongly agreed that they showed empathy, compassion and support. This finding is higher than that (37.8%) reported in a similar study [20] and the finding (71%) reported in another study [29].

Majority (82.8%) of Patient Respondent strongly agreed that they were satisfied with waiting time. The level of satisfaction with waiting time in this study is higher than that (60%) reported in the study in Lagos [22] and also the finding (49%) reported in the study [20]

Majority (85.2%) of Patient Respondent strongly agreed that they were satisfied with treatment and care received. This finding is less than that (95%) reported in the study by Akinyinka et al but higher than the finding (67.5%) reported in a similar study [21]

A limitation to this study is the small sample size. A larger sample size would have provided more precise estimates and therefore future studies should be conducted with larger sample sizes, however this did not affect validity of the study. Generalization of finding should be done with caution since a mixture of probability and non-probability sampling were utilized.

CONCLUSION

The health care provided at Primary Health Care Centre, Atelewo is of moderately good quality therefore requiring enhancement of a few services to improve quality. This is based on the high proportion (more than 70%) of respondents with positive perception in the five areas utilized to measure quality of care (perception of awareness of available services, perception of practice of person centred care, perception of accessibility, availability and affordability of services, perceived adequacy & effectiveness of Health Workers, patients' perception of satisfaction with service delivery and perception of availability of good infrastructure & environment) except in the area of adequacy of Health Workers. The number of nurses and other health workers appear not to be adequate and therefore more health care workers need to be recruited to improve quality of care.

Good attitude of health workers appears to be more important than quality of care in the uptake of services. It is therefore desirable to continue to sensitize health

workers on the need to provide patient centred care in order to achieve better service utilization and health outcomes. Patient centredness is very important for primary health care alongside quality and safety [26]. Therefore, health care workers should be sensitized on the importance of patient centredness in order to further improve quality of health care services at PHC Atelewo.

The health service with the highest awareness is immunization while the service with lowest awareness is nutrition service. The provision of routine immunization should therefore be sustained to boost the suboptimal supplemental immunization coverage while that of nutritional service should be also be improved to contribute to reduction of stunting prevalence in the state [15].

There is adequate supply of portable water and toilet facilities at PHC Atelewo in conformity with World Health Organization standard [28]. This should be maintained to maintain uptake of health services at PHC Atelewo

Physically accessibility, affordable cost of health services, adequacy of medical equipments, availability of drugs, respectfulness of health workers and satisfaction with waiting time were all significantly positively associated with patients' satisfaction with treatment and care. Therefore these service characteristics should be improved not only for PHC Atelewo but for other PHCs through effective health planning, policies and programmes. Also health workers capacity on health service delivery should be further developed and supportive supervision should be carried out regularly for improve quality of health care services delivery and better health outcomes

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