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Women's perception of quality and utilization of antenatal care and delivery services in Oshimili South Local Government Area of Delta State, Nigeria

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ABSTRACT

Background: The perception of quality of antenatal care and delivery services is one of the several factors that influence utilization of these services. This study assessed the perception of quality and utilization of antenatal care (ANC) and delivery services among women of childbearing age in Oshimili South Local Government Area (LGA) of Delta State, Nigeria.

Methods: A cross-sectional study among 301 women aged 15-49 years selected by multi-stage random sampling technique using mixed methods of data collection. Quantitative data were analyzed using SPSS version 21 while thematic analysis was done for the qualitative data.

Results: The mean age of the women was 32.0 ± 2.5 years. Most were married 287 (95.3%), had secondary education 211 (70.1%)) and self-employed 227 (75.4%). One hundred and forty-eight (49.2%) had good perception of technical competence of staff, 132 (43.9%) their safety consciousness and 134 (44.5%) effectiveness/efficiency of drugs. However, 136 (43.5%) had poor perception of waiting time, 118 (39.2%) health workers respectfulness and 116 (38.5%) compassion for patients. Two hundred and seventy-three (90.7%) and 251(83.4%) utilized ANC and delivery services, respectively, while 22 (7.3%) delivered at home.

Conclusion: The women's perception of quality of ANC and delivery services varied across domains. There was a high level of utilization of antenatal care and delivery services. However, there were few traditional birth attendant (TBA) and home deliveries. Addressing the issues of long waiting time and attitude of health workers will encourage full scale utilization of health facilities and discourage TBA and home deliveries.

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INTRODUCTION

Pregnancy and childbirth are two crucial periods in the life of a woman and her baby. A good health outcome is determined by the uptake of antenatal care (ANC) services and attendance of birth by a skilled birth attendant. Poor uptake of ANC and

delivery services are a significant contributor to maternal and neonatal deaths and disability. Currently, newborn mortality rate in Nigeria stands at 39 per 1000 live births and maternal mortality ratio (MMR) is estimated at 512 per 100,000 live births, ranking among the highest in the world.[1] In 2017, the national ANC utilization rate in Nigeria was 49% (it was lowest in the North East, as low as 27% in Yobe State), while health facility delivery rate was 38% (as low as 9% in Yobe State also).[2-4] An analysis of state-level trends for a range of Nigeria's key maternal and child health outcomes and interventions from 2000 to 2013 showed that the MMR in the North East of Nigeria stood as the highest at 1,549 per 100,000 live births, the South South at 391 per 100,000 while the South West had the lowest at 165 per 100,000 live births.[5] These worrisome high figures unveiled Nigeria as a major contributor to the sub-Saharan MMR. The maternal health indices in Delta State, Nigeria, have not been satisfactory despite the presence of the statewide free maternal program where women have free access to antenatal, delivery and postnatal services in public healthcare facilities.[6] The report from previous surveys in Delta State revealed MMR of about 300 per 100,000 live births.[4,7]

The major factors that act as barriers to the utilization of maternal health services in Nigeria are conceptualized in the Andersen's behavioral model and the three delays model of maternal health care utilization[8,9] (Figure 1). Andersen proposes that the relevant factors can be grouped into three main categories: an individual's predisposition to use medical services (age, gender, residence, occupation, education, ethnicity, and attitudes toward health); enabling or impeding circumstances (community factors that affect the availability and accessibility of health care); and the need for health care (types of illness, perceived health status, and expected outcome of treatment).[8] On the other hand, delay in decision to seek care is mainly from socio-demographic factors, delay in reaching care is related with factors of physical and economical accessibility while delay in receiving adequate health care occur as a result of factors related with quality of health care in facilities.[9]

The Institute of Medicine defined quality of care as the degree to which

health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge.[10] Women's perception of the quality of ANC and delivery services is a major factor that influences their decision to use or continue with these services and to recommend the services to others. Client's perception has traditionally been linked to the quality of services given and the extent to which specific needs are met. Various factors including attitude of staff, cost of care, time spent at the hospital and doctor communication have been found to influence client's perception. Perception of low quality of care has been reported as a major factor for non-utilization or bypassing of health services by patients.[11]

Patients' satisfaction is related to the extent to which general health care needs and condition-specific needs are met.[12] Satisfied clients are likely to come back for the services and recommend service to others. A qualitative assessment of women's satisfaction with maternal health care in referral hospitals across Nigeria reported that many women had areas of dissatisfaction, or were not satisfied at all with the quality of care. The reasons for dissatisfaction included poor staff attitude, long waiting time, poor attention to women in labour, high cost of services, and sub-standard facilities.[13] The obvious implications of this finding include non-utilization of ANC and delivery services in modern healthcare facilities and differential preference for TBAs in the communities. Another qualitative study aimed at exploring the barriers to the uptake of maternal health services from the perspectives of both women and health care professionals in Eku Town of Delta State Nigeria, found that majority of women preferred non-skilled TBAs over the hospital health service. The TBAs were viewed as more caring; with orthodox practice not being socially, culturally and religiously friendly.[14]

In order to improve maternal, child and newborn health indices, the Delta State government commenced free maternal health services in the state over a decade ago. To the best of our knowledge, an evaluation of the quality of care and the client's experiences vis-a-vis their perceptions of the services since the launch of the programme has not been documented.

The aim of this study was to assess the perception of quality of care and its influence on the utilization of ANC and delivery services among women of child bearing age in Oshimili South LGA of Delta State, Nigeria.

METHODOLOGY

Study Area: The study was carried out in Oshimili South LGA, one of the 25 LGAs making up Delta State, Nigeria from 11th of November 2019 to 17th of January 2020. Its headquarters is in Asaba, the Delta State Capital. Oshimili South LGA has a land area of approximately 603 square kilometres.[15] As at the time of the study, it has a projected population of 206,600 and an estimate of 54,117 women aged between 15-49 years from the 2006 National Population and Housing Census.[16] The LGA has nine Primary Health Centers, two General Hospitals and one Federal Medical Centre. It has nine wards and six major communities namely Asaba, Oko, Okwe, Illah, Ebu, Eze. The occupants are mostly civil servants, traders and farmers and the languages spoken are mainly Ibo and English. Christianity is the predominant religion of indigenes of the LGA.

Study design and population: This was a community based cross-sectional study which utilized both quantitative and qualitative data collection methods. The study population comprised of women of child bearing who had lived for at least one year in the LGA and carried at least one pregnancy to term while resident in the LGA. This is to ensure that participants have had reason to utilize maternal health services in the LGA.

Sample size determination and sampling: The minimum sample size of 273 was required for this study. It was calculated using the formula for single proportions ($n = z^2pq/d^2$) in a cross-sectional study.[17] The following assumptions were made at 95% confidence interval: the estimate of the expected proportion (p) of 76.8% being the proportion of women who utilized ANC services in a study carried out to determine the factors affecting the utilization of ANC services in Ibadan, Nigeria,[18] and a desired level of absolute precision (*d*) of ± 5%. Proportional allocation was done to determine the number of participants recruited from the selected communities for the study.

A multi-stage random sampling technique involving four stages was used to recruit the study participants for the quantitative survey. Stage one: six wards were selected from the nine wards in Oshimili South LGA by simple random sampling technique by balloting. The selected wards were Umuagu, Umuonaje, Cable, Oko, Uzoigwe and Okwe wards. Stage two: two communities were selected from each of the six selected wards by simple random sampling technique to give a total of 12 communities which included; Ogboofu, Jarett/Abagana, Omerigboma, Oko-Amakom, Umuafu, Umuofor, Otuogu, Ogbeilor, Okelue, Abuta, Uzoigwe and Anwai communities. Stage three: houses were selected by systematic random sampling method using the PHC house numbering system as the sample frame. The number of houses in each community was enumerated. The sampling interval (n) was determined by dividing the number of houses in each selected community by the desired sample size for that community. The starting point on each of the community was chosen by simple random sampling method and every nth house was subsequently selected. Stage four: in any selected house, one household was used for the study. However, if there are more than one household in a house, simple random sampling was used to select the household that will participate in the study. In each selected household, eligible woman of child bearing age who met the inclusion criteria were recruited for the study. The respondents for the qualitative study who were women of child bearing age were purposely recruited.

Data collection and analysis: For the quantitative survey, a structured interviewer-administered questionnaire adapted from Factor analysis from Perceived Quality Primary Care Service Scale[19] was used for the collection of quantitative data. The questionnaire consisted of sections on socio-demographic cha-racteristics of respondents, per-ception of quality of ANC and delivery services, level of utilization of ANC and delivery services and factors that could influence the use of ANC and delivery services. Perception of quality was assessed in domains of technical competence, effectiveness/efficiency, safety, waiting time, attitude of HCWs and equipment/environment. Parti-cipants rated their own perception of

each attribute on a 3-point Likert scale of 'Good', 'Fair' or 'Poor'.

In the qualitative interview, a Focus Group Discussion (FGD) guide was used for data collection. Six FGD sessions lasting between 60 to 90 minutes were held with 8-10 participants. The FGD participants were homogenous for age i.e., each group consisted of participants who were within five years age bracket. The sessions were recorded, transcribed and analyzed. The FGD guide explored four themes, namely: where women in the LGA mainly access ANC and delivery services; how women perceive the ANC and delivery services provided in the LGA; how their perception influenced their utilization of these services and other factors that influence utilization of ANC and delivery services in the LGA. Four trained research assistants who were members of the National Youth Service Corp (NYSC) in the communities assisted in data collection.

Quantitative data collected were screened for completeness, coded and analyzed using IBM SPSS version 21.0 (IBM Corp, Armonk, NY, USA). The socio-demographic characteristics of the participants, their perception of quality of ANC and delivery services and their utilization of these services including some barriers to the utlization of these services were summarized using frequencies and proportions. Content analysis along thematic lines was done for the qualitative data gotten from the FGD. The themes included perception of quality of care, utilization and barriers to utilization of ANC and delivery services.

Ethical Consideration: Ethical approval to conduct the study was obtained from the Ethics and Research Committee of the University of Benin Teaching Hospital (Protocol number: ADM/E22/A/VOL. VII/14828). The head of the respective communities where this study was carried out also gave permission for the study. A written informed consent was obtained from participating women after full assurance of confidentiality.

RESULTS

A total of 301 women of child bearing age with a mean age of 32.0 ± 2.5 years participated in this study. Most
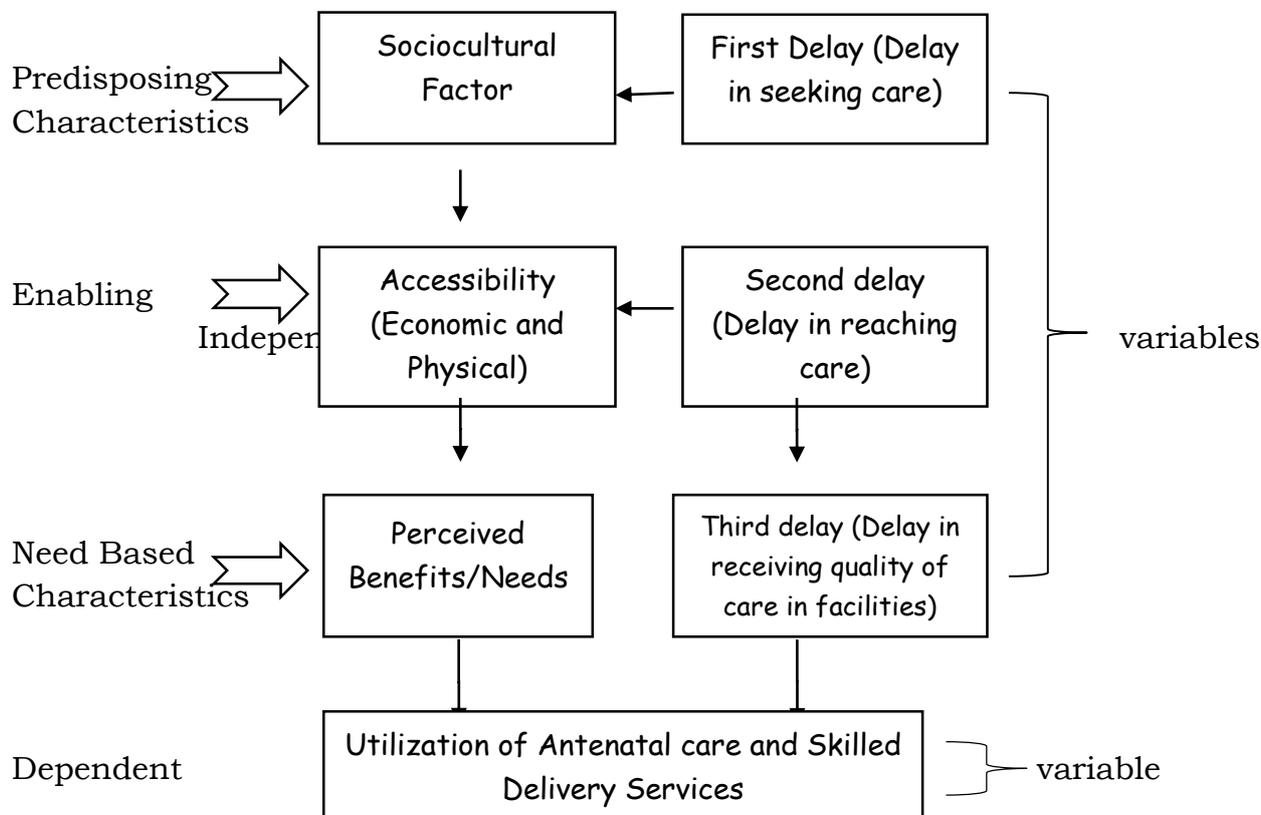
Figure 1: Conceptual framework of utilization of ANC and delivery services.
Adapted from the Anderson's behavioural model of determinants of health services utilization and the three delays model of maternal health service utilization

of them were married, 287 (95.3%) and Christians, 288 (95.7%). Majority of the women had secondary level of education, 211 (70.1%) and 227 (75.4%) were self-employed. Only 17 (6.5%) earn a monthly income of 50,000.00 naira (122 USD) while 112 (42.9%) earned between 10,000.00 and 19,999.00 naira (24 – 49 USD). Fifty-two (17.3%) had four children and above (Table 1). Table 2 shows the perception of the quality of care of ANC and delivery services by the women. Overall, a higher proportion of them had a good perception of technical competence of health workers, their safety consciousness

and effectiveness/ efficiency of drugs. Almost half of them 148 (49.2%) had a good perception of HCWs examination skills, 146 (48.5%) had good perception on the relevance of recommended drugs and tests, 75 (24.9%) had poor perception of availability of prescribed drugs while 132 (43.9%) had good perception of the safety consciousness of the health workers while attending to patients. On the skill and competence of doctors in the Federal Medical Centre, one FGD participant stated:

"The doctors in the FMC know their work, you can get any kind of treatment there. They

don't refer anyhow like all these small hospitals." (Participant from Uzoigwe ward).

Concerning attitude of health workers, a higher proportion had poor perception of their respect for patients, 118 (39.2%) and compassion towards patient 116 (38.5%). About one-third 97 (32.3%) had poor perception of the time and attention health workers give to patient while 125 (41.5%) had good perception of it. An FGD participant commenting on the attention from health workers in government hospitals stated:

"People say if they go there, they don't care for them. Instead of the nurse to come and help you when you're in labour, it's the cleaner that helps you." (Participant from Cable ward)

Few of the FGD participants commended the health workers. They attributed health workers poor attitude towards patients to the large number of patients which oftentimes overwhelm them, and the long duration of hours they work. About the general hospital, one of them said:

"They are trying, the people are too plenty. Everybody goes there because the services are free. Government should *employ more people so that the pressure will not be too much for them."* (Participant from Cable ward)

A higher proportion of the women, 136 (43.5%) had a poor perception of waiting time when they access ANC and delivery services. But majority perceived the adequacy of equipment in the health facility 138 (45.8%) and adequacy of the space for patients/visitors in the waiting area 141 (46.8%) as good. One FGD participant has this to say:

"The time we spend in the hospital is too long. Any day, you go to the hospital, you wait and wait. The workers don't resume on time. Most of them resume by 10 am and we have to go to the hospital as early as 7 am and sometimes by 3 pm, you are yet to see a doctor, sometimes you don't even get to see a doctor." (Participant from Umuagu ward)

Most of the women 273 (90.7%) had ANC in a health facility in their last pregnancy. A higher proportion of those who had ANC in the health facility 123 (45.1%) had more than 8 visits. Also, majority of them 251 (83.4%) delivered in a health facility, while 22 (7.3%), 16 (5.3%) and 12 (4.0%) delivered at home, TBA and maternity/nursing home, respectively.

The quality of care received was the major reason why more than half 174 (57.8%) of the women delivered in the respective places. Most of them 273 (90.7%) planned to deliver where they delivered. Over three-quarters 234 (77.7%) expressed willingness to deliver in a health facility if they had another pregnancy while 67 (22.3%) said they will not (Table 3). In the FGD sessions, poor attention and lack of compassion from health workers were identified as factors that negatively influenced utilization of ANC and delivery services. A participant who was delivered by a TBA stated:

> *"Me, I don't go to the hospital because people always say that they don't take care of somebody there. When my husband's sister was pregnant, she went there. They checked her and said everything was normal and they left her, they did not check on her till she started pushing. A cleaner had to help her to give birth and she had a very terrible tear."* (Participant from Okwe ward)

Another participant who gave birth at home corroborated this finding. She said:

> *"Me, I don't give birth in the health center because the news I hear is that if you go, you'll suffer. The labour will be paining you, they'll still be punishing you and even use cane on you. They make statements like Madam, it's not me that sent you, when you were at it, did you not enjoy it, that's why I decided that for me to be alive, it's better for me to stay at home."* (Participant from Cable ward)

Almost all the FGD participants asserted that long waiting time influences utilization of services negatively. On the reason why a participant goes to a maternity home being run by an auxiliary nurse, she has this to say:

> *"Me, I like to go to the maternity because they do sharp sharp, they don't waste time before they attend to you like these hospitals."* (Participant from Oko ward)

Some barriers to the utilization of ANC and delivery services are shown in Table 4. Half of the women 152 (50.0%) reported poor access road to the health facility while 109 (36.6%) lack of means of transportation to a

Table 1: Socio-demographic characteristics of respondents

Variable	Frequency (n=301)	Percent
Age group (years)		
15-19	4	1.3
20-29	109	36.2
30-39	141	46.8
40-49	47	15.7
Mean age of 32.0 ± 2.5 years		
Marital status		
Married	287	95.4
Single	10	3.3
Widowed	4	1.3
Occupation		
Self Employed	227	75.4
Housewife	40	13.3
Employed (Public or private sectors)	22	7.3
Farmer	12	4.0
Monthly income in naira*		
< 10000	61	23.4
10000 – 19999	112	42.9
20000 – 49999	71	27.2
≥50000	17	6.5
Level of education		
None	5	1.7
Primary	42	14.0
Secondary	211	70.1
Tertiary	43	14.3
Religion		
Christianity	288	95.7
Islam	12	4.0
African Traditional Religion	1	0.3
Number of Children		
1-2	127	42.2
3-4	122	40.5
≥ 4	52	17.3

n = 261

health facility. The time taken to get to the nearest health facility for 62 (20.6%) of the women was more than 30 minutes. Twenty-three (7.6%) of the women were engaged in some cultural practices during pregnancy. These includes: intake of herbal medication, abdominal massage, piecing clothing with safety pin, avoidance of protein intake and consumption of chalk/clay. The cost of transportation to the nearest facility for 12 (4.1%) women was more than 300 naira (0.73 USD). Availability and proximity to a health facility was identified as factors that could influence where women sought health care. An FGD participant stated:

"*We don't have any option, this is the only place we have here, if you want to go the general hospital, you will spend 800*

Table 2: Perception of quality of ANC and delivery services

Domain	Poor n (%)	Fair n (%)	Good n (%)
Technical competence			
How doctors/nurses examine their patients	52 (17.3)	101 (33.5)	148 (49.2)
Doctors/nurses give right treatment to patients	45 (15.0)	115 (38.2)	141 (46.8)
How well doctors/nurses monitor patients' recovery	38 (12.7)	125 (39.9)	138 (47.4)
The skill of doctors/nurses	39 (13.0)	136 (45.2)	126 (41.8)
Effectiveness/efficiency			
Availability of prescribed drugs in the health facility	75 (24.9)	100 (33.2)	126 (41.8)
Effectiveness of prescribed drugs	23 (7.6)	144 (47.9)	134 (44.5)
Drugs and test recommended for patients are needed	38 (12.7)	117 (38.9)	146 (48.5)
Safety			
Safety consciousness of staff while attending to patients	62 (20.6)	107 (35.5)	132 (43.9)
Attitude of health workers			
Doctors/nurses respect for patients	118 (39.2)	71 (23.6)	112 (37.2)
Doctors/nurses compassion towards patients	116 (38.5)	75 (24.9)	110 (36.6)
Time and attention doctor/nurse gives to patients	97 (32.3)	81 (25.2)	125 (41.5)
Waiting time			
Time patients waited before being attended to	131 (43.5)	60 (19.9)	110 (36.6)
Equipment/environment			
Adequacy of equipment in the health facility	26 (8.7)	137 (45.5)	138 (47.4)
Adequacy of space for patients/visitors in the waiting area	31 (10.3)	129 (42.9)	141 (46.8)

n = 301

Table 3: Utilization of ANC and delivery services

Variable	Frequency (n=301)	Percent
Attendance at ANC		
Yes	273	90.7
No	28	9.3
Time of Registration for ANC*		
1st trimester	115	42.1
2nd Trimester	113	41.4
3rd Trimester	45	16.5
ANC visit in last pregnancy*		
<4	31	11.4
4-7	119	43.6
≥ 8	123	45.1
Place of delivery		
General Hospital	108	35.9
Private Hospital	83	27.6
PHC Centre	56	18.6
Home	22	7.3
Traditional Birth Attendant	16	5.3
Maternity/Nursing Home	12	4.0
Federal Medical Centre	4	1.3
Reason for delivery at this place		
Quality of care	174	57.8
Nearness to home or work	60	19.9
Cost of services	35	11.6
Better attitude of health workers	21	7.0
Spouse's preference	11	3.7
Planning for place of delivery		
Planned	273	90.7
Not planned (due to complications)	28	9.3
Willingness to deliver in a health facility in another pregnancy		
Yes	234	77.7
No	67	22.3

*n = 273

Table 4: Some barriers to the utilization of ANC and delivery services

Variables	Frequency (n=301)	Percent
Poor condition of access road to health facility	152	50.5
Lack of means of transportation to health facility	109	36.2
Time to nearest health facility of more than 30 minutes	62	20.6
Cultural practice during pregnancy*	23	7.6
Transportation to nearest health facility > ₦300 (0.73 USD)	12	4.0
No prior knowledge of ANC and delivery services	10	3.3

Cultural practices include: herbal medication, abdominal massage, piecing clothing with safety pin, avoidance of protein intake and consumption of chalk/clay.

naira for transport so we have to manage what we have here." (Participant from Oko ward).

DISCUSSION

This study demonstrated that the women had varied perception of quality of ANC and delivery services. Majority of them had a good perception of technical competence of health workers, their safety consciou sness and effectiveness/ efficiency of drugs. But a good number of them had poor perception of attitude of health workers and waiting time in the health facility. However, there was a high level of utilization of ANC and delivery services. Some factors that could negatively influence the utilization of ANC and delivery services include attitude of health workers, long waiting time in the healthcare facility and cultural practices during pregnancy.

In this study, most of the women had attained at least the primary level of education. This may be explained by the fact that the study was carried out in the LGA where the state capital is located and thus dominated with civil servants and workers in government establishments.

This is very relevant for the health of women because education has a positive influence on health. Educated women are more likely to understand health risks and have better health seeking behaviour. A World Health Organization global survey on maternal and perinatal health, reported that lower levels of maternal education were associated with higher maternal mortality even amongst women who accessed care in health facilities.[20] Low educational status has been identified as a major barrier to the utilization of ANC services. The monthly income of women in this study was comparatively low and this

could probably be because majority of them are either housewives or self-employed. Unemployed women are less likely to utilize healthcare services due to financial constraints. A study in rural India found a correlation between household income and utilization of maternal health services.[21] It has also been found in many developing countries of the world that the attainment of education and having a paid job empower mothers to utilize maternal health services.[22,23]

The perception about health workers' attitude and waiting time spent in the health facility by the women was generally poor in this study. This has serious implications because they could deter women from utilizing health facilities. Although, the utilization of ANC and delivery services was high in this study, one would have expected a full scale utilization of these services in a state that has been implementing free maternal health services for more than a decade. It is worrisome that the proportion of women who expressed unwillingness to deliver in the health facility in future pregnancy (22.3%) was higher than those who did not presently deliver in the health facility

(12.6%). This implies that some of the women who accessed delivery services probably do not want to return to the health facilities because of their experiences. This could further increase delivery at home or in the hands of unskilled health personnel, with all the attendant health consequences. These categories of women may also give the health facilities negative publicity, because the reason for non-utilization of health facilities alluded to by some respondents in this study was based on hearsay and the experiences of others. A study carried out in Ayivu County, Uganda, reported that women were sometimes reluctant to use maternity care services because health care providers are perceived to be rude, insensitive and threatening to the young mothers.[24] This underscores the need for training and re-training of health workers on the need to be empathic towards patients/clients as their attitude is a driving force for utilization of services.

A higher proportion of the women who accessed ANC services in this study had eight or more visits before delivery. ANC is an important determinant of maternal health outcomes. It is the entry point to the

health care system and determines whether a mother will deliver in a health facility. ANC thus, represents a significant opportunity to reach a large number of pregnant women. Adequate ANC by skilled health care personnel has been proven not only to reduce maternal, foetal and infant morbidity and mortality, but also result in improved maternal health status and parenting behaviours after the child is born.[25]

Majority of women in this study gave birth in the general hospital, followed by private hospitals. However, the few home and TBA deliveries have a high likelihood of ending in maternal death especially when complications arise because they are usually unsuper- vised or supervised by unskilled persons. This is a major impediment to the achievement of the targets 1 and 2 of the Sustainable Development Goals 3 which are to "reduce the global maternal mortality ratio to less than 70 per 100,000 live births by 2030" and "end preventable deaths of newborns and under-five children by 2030" respectively. Many studies across different parts of Nigeria have explored the reasons why women prefer to deliver at home or TBA even when they attended ANC and knew

the importance and advantages of delivering at the health facility. These factors that influence non-utilization of health facilities for delivery operate at individual, household, community, and state levels with the major determinants being socio-cultural factors, religious practices, distance, cost of service, long waiting time in health facilities and attitude of health workers.[26-31] A qualitative study that explored reasons why women in Malawi delivered at home without skilled attendance despite receiving ANC at a health centre identified health workers' attitudes as key to women's decision to deliver at home.[11]

Although, majority of the respondents in this study will take less than 30 minutes to get to the nearest health facility, cost of transportation was mentioned as a barrier to utilization of health facilities. The poor condition of the roads and the socio-economic situation in Nigeria may be probably the reasons for these findings. The various cultural practices in pregnancy seen in this study may be detrimental to the health of the mother and the unborn child. These practices which are usually promoted by TBAs and community members are precursors to home and TBA

deliveries. Pregnant women who engage in cultural practices such as herbal medications and abdominal massage may likely deliver at home or TBA even if they had attended ANC in the health facility. This brings to fore the imperatives for health education during ANC visits, on the dangers of cultural practices during pregnancy and the need for pregnant women to refrain from such practices. Barriers to utilization of ANC and delivery services will prevent uptake of services and result in poor maternal health outcomes. Efforts should be made to eliminate or reduce these barriers to the barest minimum, in order to enhance utilization. The high maternal mortality rate despite the presence of national and state programs (such as free maternal health care in Delta state) targeted at providing access to ANC and delivery services is worrisome and concerted efforts should be directed towards increasing uptake of these services.

Limitations of study: This study assessed the perception of quality of care by the participants which is not a direct measure of quality of care. The study was also limited by recall bias because some participants may have forgotten some relevant information

about their previous pregnancy. Finally, the study was prone to information bias because the researchers relied on the participants' responses which could not be verified.

Conclusion: This study showed that women had varied perception of quality of ANC and delivery services. Majority of them had good perception of the technical competence of health workers, safety consciousness and effectiveness/efficiency of drugs, but poor perception of waiting time in the health facilities and attitude of health workers. There was a high level of utilization of ANC and delivery services. However, few women still had home and TBAs deliver. Some cultural practices such as herbal medications and abdominal massage which could act as barriers to utilization of ANC and delivery services were also identified among the women.

To fully scale up utilization of ANC and delivery services, a system of continuous dissemination of information on the benefits of these services targeted at mothers at the community level using existing community structures should be instituted. The relevant government

agencies at all levels should adequately supervise and monitor health facilities to deliver quality ANC and delivery services devoid of long waiting time. The management of health facilities should periodically organize training programs on interpersonal relations for health workers to improve their attitudes toward clients/patients. This will go a long way in encouraging full scale utilization of health facilities and discourage traditional birth attendant and home deliveries.

Conflict of interest: The authors declare no conflict of interest.

Authors' contribution: OO conceptuallized the study. Both authors contributed to the design, data collection, data analysis/interpretation, preparation of the manuscript and approved the final draft for submission.

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