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(RESEARCH ARTICLE)



## Assessment of patient satisfaction and perception of quality of antenatal care services among pregnant women attending antenatal clinics at a secondary health care facility in Anambra State, Nigeria.

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### Abstract

**Introduction:** Prenatal care is an important component of maternal care worldwide more so in sub-Saharan Africa.

**Methodology:** This work is a cross-sectional descriptive study carried out among 170 pregnant women attending antenatal clinic in health facilities in Ekwulobia, Anambra state. Convenience sampling technique was used in this study. The study instrument was a semi structured interviewer administered questionnaire which was developed according to the objectives of the study. In this study we evaluated patient waiting time, pregnancy outcome, quality of care, attitude of staff and facility neatness as parameters for measuring patient satisfaction, we also evaluated quality of service, attitude of staff, proximity to ANC centre, waiting time and cost as determinants of ANC use.

**Result:** The study showed a demonstration of good knowledge of ANC and its importance in maternal and child health, 65.6% were aware of first trimester has the most appropriate time for ANC booking. A high level of satisfaction was recorded among the participants, 65.6% rated the ANC services as very good and 30.3% rated the service as good.

**Conclusion:** Pregnant women in rural areas in eastern Nigeria receive quality and accessible antenatal care services and majority of the women are satisfied with the quality of service. Efforts to improve maternal and child health status in Eastern Nigeria is yielding fruit especially in rural areas. It is recommended that similar studies be conducted in other parts for the country to discover the conditions of ANC use and its effects and compare the factors that influence ANC use

**Keywords:** Antenatal care; Childbirth; Pregnancy; Obstetrics complication; Patient satisfaction

### 1. Introduction

Antenatal care (ANC) is one of the core interventions for improving maternal outcomes [1]. ANC services allow for early identification of pregnancy related risks and complications; it provides beneficial services including health education, vaccines, diagnostic tests and treatments [2]. Other benefits that can be derived from antenatal care include fostering good relationship between pregnant women and service providers [3]. Moreover, a pregnant woman visiting health

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facilities for ANC are expected to get advice and support, and will be more informed about health needs and self-care [4], and consequently lead to an increased utilization of emergency care services [5] [6].

Good-quality antenatal care is crucial for the prevention and detection of potential causes of obstetric complications and to avert newborn deaths and stillbirths [7].

An estimated 515,000 women die of pregnancy related causes worldwide, a rate of over 1,400 maternal deaths each year [8]. The overwhelming majority of these deaths and complications occur in developing countries. Every minute, at least one woman dies from complications related to pregnancy or childbirth, which means 529000 women a year [8].

One of the major public health concerns of the 21<sup>st</sup> century is the quality of antenatal care. The new approach to ANC also emphasizes the quality of care rather than the quantity [8] [9] [10]. Although researchers frequently highlight the importance of quality of maternal care in improving maternal and newborn health [11] [12] the quality of ANC remains insufficiently studied.

Antenatal care is a vital component of health service delivery, effectiveness of ANC service requires that important component of ANC must be provided [13]. Inadequate ANC both in terms of coverage and quality has been associated with adverse pregnancy outcomes [13]. Research shows that the quality of ANC matters for the survival of the mother and child [14] [15] and can contribute to a positive pregnancy experience [16].

The general objective is to assess patient's satisfaction and perception of quality antenatal care services among pregnant women attending antenatal clinics in a secondary health facility in Anambra state. The specific objectives is to assess the attitude of the study population towards ANC use, to assess the level of satisfaction of antenatal services among the study population, to determine the content and quality of ANC services provided to the study population and to identify factors influencing ANC service utilization among the study population.

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## **2. Methodology**

### **2.1. Study location**

Ekwulobia is a major town in Aguata local government area of Anambra state. It has a population of approximately 370,000, and is a major commercial town in the area as many commercial banks maintain their branches there. It is also a major transit hub from where travelers can connect to other far-flung cities in Nigeria. It boasts one of the major markets in Aguata. The indigenes are mainly subsistent farmers, who ply their trade at the Eke market. The town has various primary and secondary schools, several hospitals and clinics, among which is the general hospital Ekwulobia where part of this study was done [17].

### **2.2. Study Design**

A descriptive cross sectional study was employed for the purpose of this research.

### **2.3. Study Population**

This consists of pregnant women attending antenatal, maternal and child health clinics at the primary health care center and two private hospitals (Cynvic specialist hospital and Victoria specialist hospital) in Ekwulobia.

### **2.4. Inclusion Criteria**

This includes women within the study population attending the above named health facilities in Ekwulobia who were present at the selected facilities and were willing to participate.

### **2.5. Exclusion Criteria**

This includes women in the study population attending the above named health facilities in Ekwulobia who refuse to participate, and those who would not be present during the course of data collection.

### **2.6. Sample Size Determination**

The sample size was determined using the following formula [18]

$$N = (Z^2PQ) \div D^2$$

Where N is the minimum sample size,

Z= Normal standard deviate at 95% confident limit: 1.96

P = prevalence of antenatal clinic attendance rate in Nigeria: From a study on Consumer assessment of perceived quality of antenatal care services in a tertiary health care institution in Osun state, Nigeria a P- value of 90% have been obtained [19] = 0.90

Q=1-P: 0.10

D= the precision = 5% (0.05)

$N = (1.96^2 \times 0.90 \times 0.10) \div 0.05^2$

Therefore  $N = (3.841 \times 0.90 \times 0.10) \div 0.0025$

$= 0.34569 \div 0.0025$

$= 138.276$  (Minimum Sample Size)

Anticipating a non response of 10% (f),

Use the formula below to get the total sample size

Total sample size =  $n \div (1 - f)$

Where  $n = 138.276$ ,  $f = 10\%$  (0.1)

$= 138.276 \div (1 - 0.1)$

$= 138.276 \div 0.9$

$= 153.64$ , approximated to 154.

Hence the total sample size = 154

## 2.7. Sampling Method

A convenience sampling technique was employed.

## 2.8. Study Instrument

A semi structured questionnaire was used. It was developed according to the objectives of the study. The questionnaire has five (5) sections (sections A to E). Section A is based on the socio demographic profile of each respondent. Sections B & C comprised of: attitude towards antenatal care & perception of quality of antenatal care among the respondents respectively. Section D & E was based on the determinants of content and quality of antenatal care use & assessment of patient satisfaction respectively.

## 2.9. Data Collection

The questionnaire was shared to the various respondents met during the scheduled clinic days. Informed consent was gotten and they were asked to fill the questionnaire.

## 2.10. Data Analysis

Data analysis was done using statistical package for the social sciences (SPSS) version 20 and results were displayed in frequency tables. Cross tabulations was done where necessary and a p-value of  $<0.05$  taken as confidence limit.

### 2.11. Ethical consideration

The entirety of the study was clearly explained to the participants and informed consent was also obtained. The participants were assured of their confidentiality and anonymity of all information supplied for the study. They were also given freedom to withdraw from the study at any point during the study. Only participants who gave their consent were given the questionnaire. Ethical approval was also gotten from the various health care facilities in order for their patients to be involved in this study.

## 3. Results

**Table 1** socio-demographic profile

	Frequency	Percentage
<b>Age of pregnant women</b>		
14 to 19	4	2.4
20 to 24	36	21.2
25 to 29	73	42.9
30 to 34	46	27.1
35 to 39	10	5.9
40 to 44	1	0.6
<b>Marital status</b>		
Single	6	3.5
Married	164	96.5
<b>Spouse's occupation</b>		
Trader	81	47.6
Civil servant	50	29.4
Self employed	39	23.0
<b>Ethnicity of respondents</b>		
Igbo	164	96.5
Yoruba	5	2.9
Hausa	1	.6
<b>Respondents religion</b>		
Christianity	167	98.2
Islam	3	1.8
<b>Occupation of respondents</b>		
Trader	58	34.1
Civil servant	36	21.2
Self employed	76	44.7
<b>Highest education level of respondents</b>		
None	2	1.2
Primary school	6	3.5
Secondary school	58	34.1
Tertiary	104	61.2

A total of 170 pregnant women took part in the study. Table 1 above shows the socio-demographic profile of the respondents. A majority of the women 73 (42.9%) were aged between 25-29 years and 1 (0.6%) was aged between 40-44 years. Nearly all the respondents 164 (96.5%) were Igbos, 164 (96.5%) were married, and 167 (98.2%) were

Christians. In terms educational qualifications, 104(61.2%) were graduates, 58 (34.1%) have senior secondary certificates, 6 (3.5%) had first school leaving certificates, while 2 (1.2%) did not attain formal education. Seventy-six, 76 (44.7%) were self-employed, 58 (34.1%) were traders and 36(21.2%) were civil servants.

**Table 2** Attitude of the study population towards antenatal care

	Frequency	percentage
<b>Do you think attending antenatal care is important for a pregnant woman?</b>		
Yes	168	98.8
No	2	1.2
<b>Why is ANC important?</b>		
To ensure the health of the mother	40	23.5
To ensure the health of the baby	17	10.1
To prepare for safe delivery	73	42.9
To detect problems in pregnancy	40	23.5
<b>When do you think is the best time for a woman to register for ANC services?</b>		
0-3months	121	71.2
4-6months	35	20.6
7-9months	10	5.9
Anytime	4	2.4
<b>What are the places you consider appropriate for ANC services?</b>		
Private hospitals	108	63.6
Government hospital	49	28.8
Maternity	13	7.6
<b>When was your last pregnancy?</b>		
1 year ago	46	27.1
2 years ago	74	43.5
3 years ago	20	11.8
4 years ago	1	0.6
Primigravida	29	17.1
<b>During your last pregnancy, did you attend ANC?</b>		
Yes	133	78.2
No	8	4.7
Primigravida	29	17.1
Total	170	100.0

Table 2 above shows the attitude of the respondents to ante natal care, 168 (98.8%) agree that ANC is important, 73 (42.9%) think that ANC is important for preparing the other for save deliveries, 40 (23.5%) think that it is important to detect problems in pregnancy and to ensure the health of the mother and 17 (10.1%) think ANC is important to ensure the health of the baby. Majority are aware that ANC should be commenced in the first trimester and would choose to go to a hospital to get ANC services as opposed to a maternity clinic. The results also show that more than half of the half of the respondents attended ANC during their last pregnancy and practiced good child spacing.

**Table 3** Assessment of patient satisfaction

	Frequency	Percentage
<b>What was the average amount of time you waited to see the medical staff when you visited the clinic?</b>		
Less than 30 mins	15	8.8
30 mins to 1 hour	109	64.1
1 hour to 1.5 hours	45	26.5
1.5 hours to 2 hours	1	0.6
<b>Did you have adequate privacy while you were seen by the healthcare provider?</b>		
Yes	163	95.9
No	7	4.1
<b>During your ANC visit did you get enough information from the doctor to help you decide where to have your baby(babies)?</b>		
Yes, definitely	127	74.7
Yes, to some extent	36	21.2
No	7	4.1
<b>During your ANC visits, where you given enough time to ask questions or discuss your pregnancy?</b>		
Yes, definitely	143	84.1
Yes, to some extent	27	15.9
<b>What was the outcome of your last pregnancy?</b>		
Live birth	124	72.9
Abortion/miscarriage	13	7.6
Still birth	4	2.4
Primigravida	29	17.1
<b>Overall how would you rate the care you received during your pregnancy?</b>		
Very good	122	71.8
Good	41	24.1
Poor	7	4.1
<b>How would you rate the attitude of the staff at the ANC clinic?</b>		
Very good	109	64.1
Good	54	31.8
Adequate	6	3.5
Poor	1	0.6
<b>Where you happy about the facility space and neatness?</b>		
Yes	164	96.5
No	6	3.5
<b>Should you become pregnant again will you like to use this center for your ANC?</b>		
Yes	167	98.2
No	3	1.8
<b>Would you recommend this place to your friends?</b>		
Yes	168	98.8
No	2	1.2
Total	170	100.0

Table 3 above shows the respondents were largely satisfied with the services rendered, 127 (74.7%), admitted they got enough information from the doctors to help them decide where to have their babies, 143 (81.4%) admitted that they

had enough time during the ANC visits to discuss their pregnancy with the doctor, 124 (72.9%) had a live birth from their last pregnancy, 13 (7.6%) previous pregnancies ended in miscarriage/abortions whereas only 4 (2.4%) ended in a stillbirth. On the services received 122 (71.8%) rated the care as very good, 41 (24.1%) rated it as good while 7 (4.1%) rated it poor, 109 (64.9%) rated the attitude of staff as very good, 54 (31.8%), rated it as good 6 (3.5%) rated it as adequate, while only 1 person 0.6% rated it as poor, 164 were happy with the spacing and neatness at the center, 167 (98.2%) would like to use the facility again should they become pregnant, and 168 (98.8%) would recommend the center to someone else.

**Table 4** Determinants of ANC Use

	frequency	Percentage
<b>What was the reason for your choice of place of ANC?</b>		
Cost	7	4.1
Distance	10	5.9
Attitude of staff	47	27.6
Convenience	15	8.8
Husband's advice	4	2.4
Advice of friends	11	6.5
Quality of service provided	76	44.7
<b>How long does it take you to get to the ANC clinic?</b>		
Less than 30 minutes	95	55.9
30 minutes to 1 hour	70	41.2
1 hour to 1.5 hours	5	2.9
<b>Which mode of transport do you use to go to the government primary health clinic?</b>		
Walking	25	14.7
Public transportation	131	77.1
Private car	14	8.2
<b>What was the average amount of time you waited to see the medical staff when you visited the clinic?</b>		
Less than 30 mins	15	8.8
30 mins to 1 hour	109	64.1
1 hour to 1.5 hours	45	26.5
1.5 hours to 2 hours	1	0.6
<b>What do you think about the cost of services?</b>		
Very expensive	2	1.2
Expensive	15	8.8
Affordable	137	80.6
Inexpensive	15	8.8
Very inexpensive	1	0.6

Table 4 above shows the quality of service provided and the attitude of the staff were found to be the most influential factors in determining the choice of ANC location. Most of the women get to the venue by public transport, and would see a doctor within one hour. Majority, 137 (80.6%) consider the cost as affordable.



#### **4. Discussion**

This study was carried out among 170 pregnant women and our result showed that 168(98.8%) agree that ANC is important for safe delivery, 40(23.5%) think is important to detect problems during pregnancy and to ensure the health of the mother, 17(10.1%) think ANC is important to ensure the health of the baby. Majority of the respondents agree that ANC should be commenced within the first trimester of pregnancy and most of them also agree that it is better to attend ANC in hospitals rather than maternity. Most of the respondents have good record of ANC attendance and good child spacing. Most of the respondents (62.2%) attained tertiary education and another 34.1% have secondary school certificate. The high level of educational qualification of the respondents may be a positive influence on their attitude towards ANC use, this is similar to the findings of Igbokwe in 2008 [20] Living in an urban area could influence the socio cultural inclination of the women in terms of being likely surrounded by people who have a sound knowledge about ANC and other health issues. Urban dwellers are also less likely to access the services of traditional birth attendants, TBAs.

The participants in this study showed a high level of satisfaction to the services received at the ANC center, the respondents were most pleased, with the quality of interaction they had with the healthcare providers. Another marker of quality of care in this study that pleased the participants was reduced waiting time; a combined 72.8% of the participants saw the doctor within one hour. Seventy-eight percent of the participants rated the care received as very good and another 24.1% rated it as good. This high level of satisfaction is similar to the findings of Emelumadu et al. 2008 which reported an 89.7% satisfaction in the women studied. Our study found examination room privacy satisfaction in 95.5% of the participants which is higher than the 83.5% reported in a study in eastern Uganda by Tetuiet al [21].

The most important variable associated with utilization of maternal and child health services are the physical accessibility of these services especially in developing countries. In this study we evaluated quality of service attitude of staff, proximity to ANC center, waiting time, and cost as determinants of ANC use. Affordability, 80.6% was the most positive determinants of ANC use, this is contrary to the findings of Nylander in a study done in india and parkistan where ANC cost was a significant barrier to utilization of the services [22].

A study by Onojole et al. in Abeokuta in 2005 found that long waiting hours, negative attitude of health of health workers, high cost of service and inaccessibility as the as major factors that hindered ANC use [23].

The effects of these factors in the determination of ANC use are reduced among the participants of this study. In one study in northern Nigeria, it was reported that 98% of women who took part in the study were inclined to go through pregnancy without any form of antenatal care, this may be due to an interplay of socio-cultural and religious factors as well as low educational level seen among women in that region, women in the eastern part of Nigeria have a comparatively higher level of education and are not exposed to restricting religious and cultural systems.

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#### **5. Conclusion**

These results successfully generated in this study will guide policy makers on health matters and make them see how imperative it is that they intervene and the suggestions made will help direct the implementation of the primary health care programme especially utilization of antenatal care facilities so that good health care will be provided for both mother and child in Anambra state and Nigeria as a nation so as to curb this menace called maternal and child mortality.

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#### **Compliance with ethical standards**

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##### *Disclosure of conflict of interest*

The authors declared that there is no conflict of interest.

##### *Statement of informed consent*

According to the research design, voluntary informed consent was gotten from the participants after adequate data concerning the aim of the study and guarantee of confidentiality were given. Our recruitment script illustrated the

objectives of the study, its significance, implications, and probable risks. Moreover, it specified anonymity and voluntariness of participation, and thus non-participation did not impose any consequence whatsoever, and they were free to exclude from the research whenever they are no longer comfortable with the study.

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