

# Patient Satisfaction with Antenatal Services at a Private Tertiary Health Facility in Ogun State, Nigeria

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## Abstract

**Introduction:** Client satisfaction with antenatal services improves pregnancy outcomes. Research on satisfaction with antenatal care has focused largely on public facilities, leaving a significant evidence gap regarding women's experiences in private tertiary hospitals. This study assessed patient satisfaction and its associated factors among pregnant women accessing antenatal services in a private tertiary health facility in Ogun State, Nigeria.

**Methods:** A cross-sectional study design was used for the study. Pregnant women aged 18 years and above with at least two antenatal visits at Babcock University Teaching Hospital were recruited for this study. Chi-square test was used to test for association between categorical variables. Ethical clearance was obtained from the Ogun State Health Research Ethics Committee (OGHREC), Abeokuta, Ogun State.

**Results:** In this study, communication had the highest mean score ( $4.10 \pm 0.63$ ), followed by general satisfaction ( $4.03 \pm 0.61$ ). Lower mean scores were recorded for accessibility and convenience ( $3.84 \pm 0.47$ ), financial affordability ( $3.63 \pm 0.80$ ), and time spent with the doctor ( $3.48 \pm 0.82$ ). For overall satisfaction, predictors included occupation (OR = 2.45, CI: 1.17–5.11,  $p = 0.017$ ), ethnicity (OR = 0.44, CI: 0.22–0.88,  $p = 0.021$ ), monthly income (OR = 2.40, CI: 1.22–4.28,  $p = 0.012$ ) and cost of services (OR = 0.43, CI: 0.21–0.89,  $p = 0.021$ ).

**Conclusion:** Patient satisfaction with antenatal care was strongly influenced by income, occupation, cost of services, and ethnicity. Addressing socio-economic and cultural barriers is essential to enhancing maternal health outcomes and achieving Sustainable Development Goal 3.

**Keywords:** Antenatal services, Facility, Patient, Private, Satisfaction

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## Introduction

The World Health Organisation (WHO) reports that pregnancy, labour, and delivery-related problems claim the lives of 289,000 women worldwide each year (1). However, developing nations account for nearly all (99%) of these maternal deaths, with South Asia and sub-Saharan Africa having the highest rates (2). Maternal mortality was fifteen times greater in poor nations than in wealthy ones (3). Maternal care is care given to a woman during pregnancy, childbirth, and the postpartum period. Antenatal care increases the likelihood that the expectant mother will attend routine check-ups to evaluate risks, screen for and treat

prenatal conditions, improve the efficient handling of obstetric emergencies during the delivery process, and promote postpartum care (4, 5). Antenatal care is a preventive healthcare program designed to increase the likelihood of a safe birth by helping expectant mothers achieve and sustain good health throughout their pregnancy (6). This care gives the client and her partner the chance to receive health education and counselling regarding pregnancy, labour, and postpartum care, as well as opportunities for screening for congenital abnormalities, managing any ongoing or pre-existing conditions in the woman during pregnancy, and starting a preventive health

care program for women (4). It is one of the pillars of safe motherhood that has contributed to the reduction of maternal and foetal morbidity and mortality (4).

Patient satisfaction is a measure of the degree to which patients are happy with the care given by health care providers (7). Client satisfaction with antenatal services increases the likelihood of repeated use, recommendations, and adherence to recommended visits, thereby improving pregnancy outcomes (8). Conversely, dissatisfaction often drives women to traditional care, heightening maternal and foetal risks (9). In Nigeria and sub-Saharan Africa, poor quality of care (weak communication, poor provider-patient relationships, high cost of antenatal services, and inadequate services) has been linked to persistently high maternal mortality (4). Research on satisfaction with antenatal care has focused largely on public facilities, leaving a significant evidence gap regarding women's experiences in private tertiary hospitals. Understanding satisfaction in these facilities is crucial because they serve a growing proportion of women of reproductive age who often opt for private care due to perceptions of better quality (10). Private tertiary facilities often provide higher-quality care and adopt innovations more quickly, improving maternal outcomes and setting benchmarks for the wider health system (11). Without policy attention, private tertiary care risks becoming a two-tier system accessible only to the wealthy, widening inequities in maternal outcomes. Integrating them into policy creates opportunities for public-private partnerships that can expand emergency services, standardise care, and strengthen health data systems. With proper regulation, subsidies, and insurance, private maternal care can be made more equitable and accessible, reducing the risk of a two-tier system (12). Evidence from private tertiary facilities is essential for shaping policy, enhancing the quality of maternal care, and advancing progress toward Sustainable Development Goal 3 (13). Against this background, the present study investigates patients' satisfaction and identifies factors associated with satisfaction with antenatal services at a private tertiary hospital in Ogun State, Nigeria.

## Methods

### Study Area

The study was carried out at Babcock University Teaching Hospital in Ilishan-Remo, Ogun State, Nigeria. Babcock University Teaching Hospital is a privately owned tertiary health facility that was established in 2013. It is a 240-bed health facility. The hospital is owned by the Seventh-day Adventist Church in Nigeria. The hospital offers the following services: emergency clinical services, medical and surgical services, obstetric, laboratory, and physiotherapy services. The estimated number of annual antenatal clinic clients was 2,400.

### Study Design

A cross-sectional study design was used for the study. Patients' satisfaction with antenatal services was assessed using semi-structured questionnaires.

### Study Population

The study population were pregnant women who received antenatal services (during the study period) at Babcock University Teaching Hospital, Ilishan-Remo, Ogun State.

### Inclusion criteria

Pregnant women aged 18 years and above with at least two antenatal visits at Babcock University Teaching Hospital were recruited for the study.

### Exclusion criteria

Pregnant women aged 18 years and above with at least two antenatal visits who were critically ill at the time of data collection.

### Sample size determination

Sample size was determined using Cochran's formula.

$$n_0 = \frac{Z^2 \cdot p \cdot (1 - p)}{e^2}$$

Z is the critical value of the normal distribution, which is 1.96  
P = 88.3% Proportion of satisfied patients from a previous study (14).

e is the margin of error = 0.05

$$\frac{(1.96)^2(0.883)(0.117)}{(0.05)^2}$$

=0.387/ 0.0025 = 154.8, which is approximately 155

Considering a 10% non-response rate, the estimated sample size =171. The sample size was inflated to 215 to ensure adequate statistical power for subgroup and multivariate analyses.

### Sampling Technique

The total number of pregnant women accessing antenatal services at Babcock University Teaching Hospital in a month was 200. Patients were enrolled in the study by consecutive recruitment. Every patient who fulfilled the inclusion criteria during the period of study was recruited for the study. The study duration was 2 months. Although consecutive recruitment was used in this study, it is limited by selection bias.

### Data Collection Tool

Patient satisfaction with antenatal services was assessed using the Patient Satisfaction Questionnaire (PSQ) 18 (15). The questionnaire assesses the following domains: general satisfaction, technical quality, accessibility of services, interpersonal manner, communication, finance, and time spent with the doctor. All items are scored so that high scores reflect satisfaction with clinical services while low scores reflect dissatisfaction with clinical services (5 = strongly agree, 4= agree, 3=don't know, 2=disagree, and 1 = strongly

disagree (15). For negatively worded items, responses were reverse-coded during analysis to maintain this consistency. The scores in each sub-scale were added, and the mean score was calculated for each domain. Scores higher than the mean score in each domain were rated as satisfied, while scores lower than the mean score in each domain were rated as non-satisfied. The study questionnaire is available from the corresponding author upon reasonable request.

#### *Pretesting of the Data Collection Tool*

The questionnaire was pre-tested among 10% of the sample size (antenatal women accessing care) at the Federal Medical Centre in Abeokuta, Ogun State. Acceptability of the questions and their capacity to elicit accurate responses that are consistent with the study objectives were assessed. All corrections were made before the tool was finally used for this study.

#### *Data Collection Method*

The method of data collection was interviewer-based. This was conducted by four trained research assistants as an exit interview. Confidentiality was guaranteed, and verbal consent was obtained from patients.

#### *Statistical Analysis*

Data analysis was done using the International Business Machine Corporation (IBM) Statistical Package for the Social Sciences (SPSS) Statistics version 25. Descriptive statistics were calculated and presented as frequencies, proportions, standard deviations, and means. Chi-square test was used to test for association between categorical variables. The level of significance was set at 5% (0.05). Binary logistic regression was employed because the outcome variable was dichotomised (satisfied and non-satisfied), making this approach appropriate for modelling the relationship between predictor variables and the log-odds of the outcome. This method allows for simultaneous inclusion of categorical and continuous predictors, does not assume normality of errors, and provides odds ratios that facilitate interpretation of association. The criteria for inclusion of variables from bivariate analysis in logistic regression analysis were  $p < 0.05$ .

#### **Results**

The respondents had a mean age of  $30.42 \pm 5.27$  years. The majority were married (95.3%), most had attained tertiary education (84.7%), over half were skilled workers (54.5%), 42.8% reported a monthly income between ₦50,000 and ₦99,999, and 58.6% identified as Yoruba (Table 1).

**Table 1: Patients' socio-demographic characteristics**

| Variable                      | Frequency (n=215) | Percentage (%) |
|-------------------------------|-------------------|----------------|
| <b>Age (years)</b>            |                   |                |
| 21-30                         | 128               | 59.5           |
| 31-40                         | 81                | 37.7           |
| 41-50                         | 6                 | 2.8            |
| Mean age $30.42 \pm 5.27$     |                   |                |
| <b>Marital Status</b>         |                   |                |
| Single                        | 10                | 4.7            |
| Married                       | 205               | 95.3           |
| Separated                     | 0                 | 0              |
| widow                         | 0                 | 0              |
| <b>Educational Level</b>      |                   |                |
| No formal education           | 0                 | 0              |
| Primary                       | 5                 | 2.3            |
| Secondary                     | 28                | 13.0           |
| Tertiary                      | 182               | 84.7           |
| <b>Occupation</b>             |                   |                |
| Professional                  | 8                 | 4.8            |
| Skilled                       | 90                | 54.5           |
| Semi-skilled                  | 9                 | 5.5            |
| Unskilled                     | 45                | 27.3           |
| Unemployed                    | 13                | 7.9            |
| <b>Monthly income (Naira)</b> |                   |                |
| <50,000                       | 57                | 26.5           |
| 50,000-99,999                 | 92                | 42.8           |
| 100,000-149,999               | 5                 | 2.3            |
| $\geq 150,000$                | 61                | 28.4           |
| <b>Ethnicity</b>              |                   |                |

|        |     |      |
|--------|-----|------|
| Yoruba | 126 | 58.6 |
| Igbo   | 32  | 29.3 |
| Hausa  | 5   | 2.3  |
| Others | 21  | 9.8  |

Table 2 shows that 62.3% of the respondents reached the health facility within 30 minutes, the majority (78.6%) were satisfied with the cost of antenatal care, (70.2%) booked early in the first trimester, 37.2% reported a waiting time of less than 30 minutes, and 35.8% had one previous pregnancy.

**Table 2: Time taken to reach facility, cost of care, gestational age at booking, waiting time at clinic, and number of previous pregnancies**

| Variable                                                              | Frequency (n=215) | Percentage (%) |
|-----------------------------------------------------------------------|-------------------|----------------|
| <b>Time taken to reach the health facility from home (in minutes)</b> |                   |                |
| Less than 30minutes                                                   | 134               | 62.3           |
| 30-59minutes                                                          | 50                | 23.3           |
| 60-119minutes(1-2hrs)                                                 | 28                | 13.0           |
| ≥120minutes (≥2hrs)                                                   | 3                 | 1.4            |
| <b>Cost of Antenatal Care</b>                                         |                   |                |
| Very high                                                             | 9                 | 4.2            |
| High                                                                  | 28                | 13.0           |
| Satisfactory                                                          | 169               | 78.6           |
| Not sure                                                              | 9                 | 4.2            |
| <b>Gestational age at booking (months)</b>                            |                   |                |
| 1 <sup>st</sup> trimester                                             | 151               | 70.2           |
| 2 <sup>nd</sup> trimester                                             | 58                | 27.0           |
| 3 <sup>rd</sup> trimester                                             | 6                 | 2.8            |
| <b>Waiting time at the Antenatal clinic (in minutes)</b>              |                   |                |
| Less than 30minutes                                                   | 80                | 37.2           |
| 30-59minutes                                                          | 67                | 31.2           |
| 60-119minutes(1-2hrs)                                                 | 44                | 19.5           |
| ≥120minutes (≥2hrs)                                                   | 26                | 12.1           |
| <b>Number of previous pregnancies</b>                                 |                   |                |
| 1                                                                     | 77                | 35.8           |
| 2                                                                     | 65                | 30.2           |
| 3                                                                     | 55                | 25.6           |
| 4                                                                     | 9                 | 4.2            |
| 5                                                                     | 9                 | 4.2            |

In Table 3, the highest mean score was reported for accessibility and convenience ( $3.84 \pm 0.47$ ), financial communication ( $4.10 \pm 0.63$ ), followed by general affordability ( $3.63 \pm 0.80$ ), and time spent with the doctor satisfaction ( $4.03 \pm 0.61$ ). Lower scores were observed in ( $3.48 \pm 0.82$ ).

**Table 3: Satisfaction rating in antenatal clinic**

| Variable (Domains of satisfaction) | Satisfied  | Not Satisfied | Mean      |
|------------------------------------|------------|---------------|-----------|
| General Satisfaction               | 162 (75.3) | 53(24.7)      | 4.03±0.61 |
| Technical Quality                  | 131 (60.9) | 84(39.1)      | 3.97±0.49 |
| Inter-personal Manner              | 137 (63.7) | 78 (36.3)     | 3.80±0.83 |
| Finance                            | 110(51.2)  | 105(48.8)     | 3.63±0.80 |
| Communication                      | 173(80.5)  | 42 (19.5)     | 4.10±0.63 |
| Accessibility and Convenience      | 103 (47.9) | 112 (52.1)    | 3.84±0.47 |
| Time spent with the Doctor         | 133 (61.9) | 82(38.1)      | 3.48±0.82 |

This table shows the various activities in the antenatal clinic with the patients' responses.

**Table 4: Activities in the antenatal clinic (health talk, examinations, and investigations in the antenatal clinic)**

| Variable                                              | Frequency (n=215) | Per cent (%) |
|-------------------------------------------------------|-------------------|--------------|
| Ask about medical history                             |                   |              |
| Yes                                                   | 211               | 98.1         |
| No                                                    | 4                 | 1.9          |
| Take a blood sample                                   |                   |              |
| Yes                                                   | 200               | 93.0         |
| No                                                    | 15                | 7.0          |
| Take a urine sample                                   |                   |              |
| Yes                                                   | 215               |              |
| Give an iron supplement                               |                   |              |
| Yes                                                   | 197               | 91.6         |
| No                                                    | 18                | 8.4          |
| Give information about the diet                       |                   |              |
| Yes                                                   | 209               | 97.2         |
| No                                                    | 6                 | 2.8          |
| Discuss the place of birth                            |                   |              |
| Yes                                                   | 194               | 90.2         |
| No                                                    | 21                | 9.8          |
| Discuss the benefits of delivery in a health facility |                   |              |
| Yes                                                   | 207               | 96.3         |
| No                                                    | 8                 | 3.7          |
| Advise what to do if there is an emergency            |                   |              |
| Yes                                                   | 212               | 98.6         |
| No                                                    | 3                 | 1.4          |
| Give malaria medicine                                 |                   |              |
| Yes                                                   | 194               | 90.2         |
| No                                                    | 21                | 9.8          |
| Discuss child spacing                                 |                   |              |
| Yes                                                   | 197               | 91.6         |
| No                                                    | 18                | 8.4          |
| Talk about sexually transmitted diseases              |                   |              |
| Yes                                                   | 201               | 93.5         |
| No                                                    | 14                | 6.5          |
| Information about how to take care of a baby          |                   |              |
| Yes                                                   | 212               | 98.6         |
| No                                                    | 3                 | 1.4          |
| How to get to the facility in an emergency            |                   |              |
| Yes                                                   | 212               | 98.6         |
| No                                                    | 3                 | 1.4          |
| Check blood pressure today                            |                   |              |
| Yes                                                   | 212               | 98.6         |
| No                                                    | 3                 | 1.4          |
| Perform abdominal examination                         |                   |              |
| Yes                                                   | 206               | 95.8         |
| No                                                    | 9                 | 4.2          |
| Listen to the baby's heart rate                       |                   |              |
| Yes                                                   | 199               | 92.6         |
| No                                                    | 16                | 7.4          |

Table 5 shows that occupation ( $\chi^2 = 14.151$ ,  $p=0.003$ ), ethnicity ( $\chi^2=7.981$ ,  $p=0.046$ ), monthly income ( $\chi^2=9.228$ ,  $p=0.026$ ), and cost of antenatal services ( $\chi^2=11.716$ ,  $p=0.008$ ) are associated with general satisfaction. Occupation ( $\chi^2=8.788$ ,  $p=0.032$ ) and cost of antenatal services ( $\chi^2=26.317$ ,  $p<0.001$ ) are associated with satisfaction with finance. Education ( $\chi^2 = 7.176$ ,  $p=0.028$ ), monthly income ( $\chi^2=13.258$ ,  $p=0.004$ ), and cost of antenatal services ( $\chi^2=9.004$ ,  $p=0.029$ ) are associated with accessibility and convenience of antenatal care. Occupation ( $\chi^2 = 10.118$ ,  $p=0.018$ ), monthly income ( $\chi^2=11.977$ ,  $p=0.007$ ), education ( $\chi^2=6.601$ ,  $p=0.037$ ), cost of antenatal services ( $\chi^2=10.189$ ,  $p=0.017$ ) and ethnicity ( $\chi^2 = 11.412$ ,  $p=0.010$ ) are significantly associated with communication. Occupation is significantly associated with interpersonal manner ( $\chi^2=8.390$ ,  $p=0.039$ ).

Table 5: Association between socio-demographic characteristics and general satisfaction, finance, accessibility, communication, and interpersonal manner

| Variable                    | $\chi^2$ | P-value      | df |
|-----------------------------|----------|--------------|----|
| <b>General Satisfaction</b> |          |              |    |
| Cost of antenatal services  | 11.716   | <b>0.008</b> | 3  |
| Education                   | 1.868    | 0.393        | 2  |
| Occupation                  | 14.151   | <b>0.003</b> | 3  |
| Monthly income              | 9.228    | <b>0.026</b> | 3  |
| Ethnicity                   | 7.981    | <b>0.046</b> | 3  |
| <b>Finance</b>              |          |              |    |
| Occupation                  | 8.788    | <b>0.032</b> | 3  |
| Monthly income              | 1.604    | 0.659        | 3  |
| Cost of antenatal service   | 26.317   | <b>0.000</b> | 3  |
| <b>Accessibility</b>        |          |              |    |
| Occupation                  | 5.069    | 0.167        | 3  |
| Monthly income              | 13.259   | <b>0.004</b> | 3  |
| Education                   | 7.176    | <b>0.028</b> | 2  |
| Cost of antenatal service   | 9.004    | <b>0.029</b> | 3  |
| <b>Communication</b>        |          |              |    |
| Occupation                  | 10.118   | <b>0.018</b> | 3  |
| Monthly income              | 11.977   | <b>0.007</b> | 2  |
| Education                   | 6.601    | <b>0.037</b> | 2  |
| Ethnicity                   | 11.412   | <b>0.010</b> | 3  |
| Cost of antenatal service   | 10.189   | <b>0.017</b> | 3  |
| <b>Interpersonal manner</b> |          |              |    |
| Occupation                  | 8.390    | <b>0.039</b> | 3  |

Table 6 shows the predictors of general satisfaction, communication, financial aspects of care, accessibility, and convenience. For overall satisfaction, predictors included occupation (OR = 2.45, CI: 1.17–5.11,  $p = 0.017$ ), ethnicity (OR = 0.44, CI: 0.22–0.88,  $p = 0.021$ ), monthly income (OR = 2.40, CI: 1.22–4.28,  $p = 0.012$ ) and cost of services (OR = 0.43, CI: 0.21–0.89,  $p = 0.021$ ). Ethnicity (OR = 0.34, CI: 0.16–0.70,  $p = 0.004$ ) was identified as the predictor of communication. Satisfaction with the financial aspects of antenatal care was most strongly predicted by occupation (OR = 0.36, CI: 0.18–0.73,  $p = 0.004$ ) and cost of services (OR = 0.19, CI: 0.09–0.39,  $p < 0.001$ ). Monthly income (OR = 1.84, CI: 1.05–3.21,  $p = 0.032$ ) emerged as the predictor of accessibility and convenience. Overall satisfaction was positively associated with professional occupations and higher monthly income, while higher service costs were linked to reduced satisfaction. With respect to communication, women from minority ethnic groups were less likely to report satisfaction with provider interactions. Financial satisfaction was lower among women in lower-paying jobs and was markedly diminished when service costs were high. In contrast, higher income was associated with greater satisfaction regarding the accessibility and convenience of care.

Table 6: Results of logistic regression analysis

| Variable                             | B      | S.E   | Wald   | P-value      | df | Exp (B) | 95% CI      |
|--------------------------------------|--------|-------|--------|--------------|----|---------|-------------|
| <b>General Satisfaction</b>          |        |       |        |              |    |         |             |
| Cost of antenatal service            | -0.846 | 0.371 | 5.194  | <b>0.021</b> | 1  | 0.429   | 0.207-0.888 |
| Occupation                           | 0.895  | 0.376 | 5.677  | <b>0.017</b> | 1  | 2.448   | 1.172-5.112 |
| Monthly income                       | 0.874  | 0.346 | 6.379  | <b>0.012</b> | 1  | 2.398   | 1.216-4.276 |
| Ethnicity                            | 0.825  | 0.358 | 5.308  | <b>0.021</b> | 1  | 0.438   | 0.217-0.884 |
| Constant                             | 3.966  | 1.288 | 0.468  | 0.494        | 1  | 0.368   |             |
| <b>Finance</b>                       |        |       |        |              |    |         |             |
| Monthly Income                       | 0.287  | 0.300 | 0.915  | 0.339        | 1  | 1.333   | 0.740-2.402 |
| Occupation                           | -1.013 | 0.354 | 8.180  | <b>0.004</b> | 1  | 0.363   | 0.181-0.727 |
| Cost of services                     | -1.682 | 0.381 | 19.439 | <b>0.000</b> | 1  | 0.186   | 0.088-0.393 |
| Constant                             | 1.195  | 2.170 | 0.303  | 0.582        | 1  | 3.305   |             |
| <b>Accessibility and Convenience</b> |        |       |        |              |    |         |             |
| Occupation                           | -0.371 | 0.317 | 1.365  | 0.243        | 1  | 0.690   | 0.370-1.286 |

|                      |        |       |       |              |   |       |             |
|----------------------|--------|-------|-------|--------------|---|-------|-------------|
| Monthly income       | 0.608  | 0.284 | 4.598 | <b>0.032</b> | 1 | 1.838 | 1.054-3.205 |
| Cost of services     | -0.489 | 0.334 | 2.137 | 0.144        | 1 | 0.613 | 0.319-1.181 |
| Constant             | -1.881 | 1.896 | 0.983 | 0.321        | 1 | 0.153 |             |
| <b>Communication</b> |        |       |       |              |   |       |             |
| Age                  | -0.036 | 0.058 | 0.374 | 0.541        | 1 | 0.965 | 0.861-1.082 |
| Education            | -0.209 | 0.436 | 0.229 | 0.632        | 1 | 0.812 | 0.346-1.906 |
| Ethnicity            | -1.095 | 0.377 | 8.438 | <b>0.004</b> | 1 | 0.335 | 0.160-0.700 |
| Constant             | 1.315  | 2.499 | 0.277 | 0.599        | 1 | 3.723 |             |

## Discussion

The socio-demographic profile of respondents in this study reflects a relatively young, educated, and predominantly married population, with over half engaged in skilled occupations. These findings are broadly comparable to reports from Osun State, where most women were aged 20–39 years and belonged to the Yoruba ethnic group (16), but differ from studies in Ebonyi State, where the mean age was higher and a larger proportion were older women (17). Such variations may reflect contextual differences in fertility patterns, education levels, and healthcare-seeking behaviour across Nigerian regions. Despite most respondents reaching facilities within 30 minutes, more than half expressed dissatisfaction with service accessibility, and many experienced prolonged waiting times. These barriers are consistent with findings reported by Idowu et al., where long travel times and clinic delays emerged as major obstacles to antenatal care (16). Delays and distance to facilities suggest systemic inefficiencies and geographic inequities, underscoring the need for decentralisation and better distribution of maternal health services (4). Nearly half of the women reported dissatisfaction with financial affordability, and one in six perceived antenatal care as expensive. Similar findings from Nigeria (10, 18) and Ethiopia (13) confirm that out-of-pocket costs remain a central determinant of patient satisfaction. In contexts where health insurance coverage is limited, women with unstable income are particularly vulnerable, leading to reduced utilization and incomplete visits (2). This highlights the importance of financial protection schemes and subsidized maternal health services. The overall satisfaction rate of 75.3% in this study is lower than figures reported in other Nigerian states, where levels exceeded 80–90% (6, 19), and in India, where rates were close to 90% (3). However, it is substantially higher than satisfaction levels reported in Nepal and Ethiopia, which were around 40% (5, 20). These wide variations reinforce that patient satisfaction is highly context-specific, shaped by differences in health system capacity, resource availability, and women's expectations of care (21). Communication was the best-rated domain, with over 80% satisfaction, aligning with evidence from Nigeria and India that women highly value respectful interaction, empathy, and clear information (3, 17). This suggests that provider–patient communication is a consistent strength across settings, possibly reflecting cultural expectations of reassurance and emotional support during pregnancy. However, the relatively low rating for time

spent with doctors indicates that while communication is appreciated, consultation depth remains insufficient (8).

In this study, socioeconomic and cultural factors significantly shaped satisfaction. Occupation, monthly income, ethnicity, and cost of services were strong predictors of overall satisfaction. Women in professional or higher-status occupations had approximately 2.4 times higher odds of reporting satisfaction compared to those who were unemployed, while those in higher income brackets demonstrated a similar 2.4-fold increase. These strong, positive associations underscore the role of socioeconomic capital in shaping patient experiences. The findings are consistent with social determinants of health theory, which emphasises that access to resources and job security buffer against life stressors, improve access to higher-quality services, and ultimately enhance satisfaction (22). Conversely, the cost of services showed a significant negative association with satisfaction ( $OR = 0.43$ ,  $p = 0.021$ ). This indicates that financial burden constitutes a major barrier, either limiting access or creating expectations of value that are unmet, thereby contributing to dissatisfaction (18). Ethnicity was another critical predictor (18). Women from minority ethnic groups had less than half the odds of reporting satisfaction compared to majority group counterparts ( $OR = 0.44$ ,  $p = 0.021$ ). This disparity suggests that cultural barriers, unmet culturally specific needs, or systemic inequities may drive a substantial satisfaction gap. Explanations may include linguistic barriers, differences in communication styles, limited cultural competence among providers, or even discrimination. All of these can alienate service users and reduce their satisfaction. Ethnicity also significantly predicted communication satisfaction: minority group participants had only 0.34 times the odds of reporting satisfactory communication, underscoring persistent inequities in provider–patient interactions (22). Occupational status further influenced satisfaction with the financial aspects of care. Participants in manual labour, informal work, or unemployed categories were substantially less likely to be satisfied compared to those in formal or professional employment ( $OR = 0.36$ ,  $CI: 0.18–0.73$ ,  $p = 0.004$ ), reflecting the greater affordability challenges faced by women with unstable incomes. This finding illustrates how occupation, as a proxy for socioeconomic stability, directly shapes perceptions of financial strain in maternal healthcare. The cost of services was an even more powerful determinant of financial satisfaction. The very low odds ratio ( $OR = 0.19$ ,  $CI: 0.09–0.39$ ,  $p < 0.001$ ) demonstrates that rising service

costs sharply diminish satisfaction, with an 81% reduction in the odds of being satisfied for each upward step in perceived cost. These findings depict a clear picture of economic vulnerability. Women in lower occupational strata are simultaneously more exposed to relative cost burdens and less equipped to absorb them, creating a double disadvantage. This dynamic reflects the concept of catastrophic health expenditure, where necessary healthcare costs threaten household financial stability and compound existing inequities (1, 18). Comparable studies in Nigeria and Ethiopia also highlight the influence of socioeconomic status and cultural identity on perceptions of quality (4, 23). Private facilities are appealing due to shorter travel times, greater availability of medicines, and more favourable staff attitudes; yet they remain exclusionary because of high costs, urban concentration, and inequitable staffing that limit access for the poorest and most vulnerable (11, 12). This duality underscores the structural weaknesses of mixed health systems: while private providers can expand choice and responsiveness, in the absence of financial protection, effective regulation, and equitable distribution of staff and facilities, they risk exacerbating health inequalities (11, 12). The findings from this study align with studies showing that women of higher socioeconomic standing often demand greater courtesy and empathy, while lower-income women face barriers to affordability and access (10, 18). Education, waiting time, and cost have consistently emerged as key predictors of satisfaction across African settings, though evidence from meta-analyses indicates that waiting time is among the most universally significant factors (21). This suggests that improving service efficiency and reducing delays may yield immediate gains in satisfaction across diverse populations.

Overall, these findings highlight that patient satisfaction with antenatal care is influenced not only by the organization of the health system but also by wider socioeconomic and cultural factors. Strategies to enhance satisfaction include improving efficiency to reduce waiting times through interventions such as staffing adjustments, task shifting, extended service hours, and structured appointment systems. Additional measures encompass expanding financial protection via health insurance and subsidies, decentralising services to promote equitable access, and strengthening staff training in cultural competence to enhance communication (24). Implementing these interventions is vital for improving maternal experiences, sustaining antenatal care utilisation, and advancing progress toward Sustainable Development Goal 3.

## Conclusion

This study indicates that women's satisfaction with antenatal care is influenced by financial capacity, occupation, and cultural background, with communication identified as a relative strength, while affordability, accessibility, and consultation time remain key challenges.

Addressing these challenges will require improving the affordability of antenatal services, expanding financial protection mechanisms such as insurance and subsidies, implementing strategies to reduce waiting times, including task shifting and appointment systems, strengthening staff training in cultural competence, and public-private partnerships for maternal care.

## Abbreviations

ANC: Antenatal Care

IBM: International Business Machines Corporation

LGAs: Local Government Areas

OGHREC: Ogun State Health Research Ethics Committee

PSQ: Patient Satisfaction Questionnaires

SPSS: Statistical Package for the Social Sciences

WHO: World Health Organisation

## Declarations

**Ethics Approval and Consent to Participate:** Ethical clearance was obtained from Ogun State Health Research Ethics Committee (OGHREC), Department of Planning, Research and Statistics, Abeokuta, Ogun State (Approval No is OGHREC/467/2025/540/APP). Written informed consent was obtained from the patients. Participation in this study was voluntary, and details about the aims and objectives of the study were explained to the patients. The anonymity of patients was ensured, and they were free to withdraw from the research at any stage. The benefit of the research was also explained to the patients.

**Data Availability:** Data for this work are available from the authors and may be presented on request.

**Competing Interests:** None.

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**Author contributions:** OAO conceived and designed the study. ANO, OYA, and OOT drafted the work and reviewed it critically for important intellectual content. OVC, ONE, OJO approved the final draft to be published. SKJ, OTA were accountable for ensuring the integrity and supervision of the work. All authors approved the final version

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