



Knowledge, attitude and perception of women attending antenatal clinic towards caesarean section at a tertiary facility in south-south Nigeria

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Abstract

Context: Caesarean section (CS) is a life-saving obstetric procedure, yet its utilisation remains disproportionately low in sub-Saharan Africa, including Nigeria, where rates fall below the WHO-recommended minimum. Demand-side barriers rooted in inadequate knowledge, negative attitudes, and cultural misconceptions continue to drive this gap.

Objective: This study assessed the knowledge, attitudes, and perceptions of pregnant women attending antenatal care at a tertiary facility in South-South Nigeria towards caesarean sections.

Materials and Methods: A descriptive cross-sectional study was conducted among 290 consenting pregnant women attending the antenatal clinic of the Federal Medical Centre (FMC), Asaba, Delta State, between 1st March and 31st May 2024. Data were documented and analysed using SPSS version 26, and the level of significance was set at 5%.

Results: The mean age of respondents was 31.58±5.69 years. Good knowledge of CS was demonstrated by 150 (51.7%) of respondents, a positive attitude was reported by 275 (94.8%) of respondents, and good perception was held by 281 (96.9%) of study participants. Occupation ($p = 0.004$), parity ($p < 0.001$), and previous mode of delivery ($p < 0.001$) were significantly associated with a positive attitude towards CS.

Conclusion: Women attending antenatal care at FMC Asaba demonstrated predominantly good knowledge, positive attitude, and good perception towards caesarean section. Specific knowledge gaps and persistent cost perceptions remain addressable barriers. Occupation, parity and previous mode of delivery of the respondents were associated with a positive attitude towards caesarean section. Sustained

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evidence-based antenatal counselling on CS indications, safety, complications, and cost-mitigation pathways is recommended.

Keywords: Caesarean section, knowledge, attitude, perception, antenatal care

Introduction

Caesarean section (CS) is one of the most commonly performed surgical procedures worldwide.¹ It is defined as the surgical delivery of a foetus, placenta, and membranes through deliberate incisions in the anterior abdominal wall and uterine wall.¹ When performed for appropriate indications, it is among the most effective life-saving interventions in obstetric practice, significantly reducing maternal and perinatal morbidity and mortality associated with obstructed labour, placenta praevia, uterine rupture, foetal distress, and other obstetric emergencies.^{2,3}

This operative technique has undergone considerable evolution over the centuries. The classical Sanger method, which employed a vertical incision through the upper uterine segment, was associated with high rates of subsequent uterine rupture and has largely been abandoned. The lower uterine segment approach described by Munro Kerr provided a more anatomically favourable incision site with a reduced risk of uterine rupture in subsequent pregnancies, and it remains the basis of contemporary CS practice.⁴ The Joel-Cohen technique, which employs a transverse skin incision with blunt dissection of the subcutaneous tissue and parietal peritoneum, was later shown to reduce operative time and intra-operative blood loss.⁵ Building on this, Stark and Finkel demonstrated that modifications including single-layer uterine closure further reduced operating time, analgesic requirement, and postoperative morbidity.⁶ These advances have collectively made CS a safer and more standardised procedure; nonetheless, its effective utilisation depends critically on women understanding, accepting, and, when clinically necessary, consenting to the procedure.

Globally, CS rates have risen sharply over the past three decades. Betran et al.⁷ documented an average global rate of CS of 18.6%, ranging from 6% to 27.2% in the least and most developed regions, respectively, in 2014. They also noted a 12.4% absolute increase in CS rates between 1990 and 2014, and a 4.4% average annual rate of increase within the same time frame. According to their findings, the lowest rates of CS were in Africa (7.3%) and more specifically in Western Africa (3%), while the highest rates of CS were in Latin America and the Caribbean (40.5%), with South

America being the sub-region with the highest CS rates in the world (42.9%). Boerma et al.⁸ reported CS rates as high as 44.3% in Latin America and the Caribbean, far exceeding clinical necessity, and 4.1% in West and Central Africa. Ye et al.⁹ observed that a population-level caesarean section rate above 10-15% is hardly justified from the medical perspective, while Molina et al.¹⁰ found that caesarean delivery rates of up to approximately 19 per 100 live births were associated with lower maternal or neonatal mortality among WHO member states.

The World Health Organisation (WHO) had earlier pegged a CS rate of 10-15% in 1985.¹¹ However, this reference rate for CS has received intense criticism over the years. Though global concerns about CS rates are understandable, a CS when medically justified can prevent maternal and perinatal morbidity and mortality. This led to the WHO statement on CS rates in 2015, which discussed CS rates at the population level and the hospital level, as well as the need for a universal classification system for caesarean sections.¹¹ The WHO noted that at the population level, CS rates higher than 10% are not associated with reductions in maternal and newborn mortality rates. They also recommended providing a caesarean section for medically indicated reasons, and providing it to women in need rather than striving to achieve a specific rate.¹¹ On the other hand, the WHO also proposed the Robson classification system as a global standard for assessing, monitoring, and comparing caesarean section rates within healthcare facilities over time and between facilities.¹¹

Nigeria, with a high maternal mortality ratio estimated at 512 deaths per 100,000 live births according to the 2024 National Demographic and Health Survey (NDHS)¹², and CS rates that remain below 10% at many facilities, represents one of the most consequential settings in which this utilisation gap must be addressed. The 2024 NDHS showed that the percentage of CS births among women aged 15-49 years though has increased over time, from 2% in 2013 and 3% in 2018 to 6% in 2024.¹² This was still below the recommended WHO values.

The underutilisation of CS in Nigeria is driven by both supply-side and demand-side factors. On the demand side, Sunday-Adeoye et al.¹³ observed that many pregnant Nigerian women regard CS as

abnormal and undesirable, a perception that carries social stigma and can translate directly into refusal of recommended surgical intervention. Prevailing cultural and religious belief systems in many Nigerian communities reinforce the notion that the capacity to deliver vaginally is intrinsic to womanhood, rendering operative delivery a source of shame rather than a medically rational response to a clinical emergency. Studies from diverse Nigerian settings and elsewhere in West Africa confirm that such negative attitudes and knowledge deficits persist, even in populations with access to formal healthcare, and that their correction requires targeted, evidence-based educational interventions.¹⁴⁻¹⁸

South-South Nigeria carries a disproportionate burden of maternal morbidity and mortality, yet hosts a comparatively urbanised population with reasonable access to tertiary healthcare, making it an instructive setting for examining demand-side determinants of CS uptake. To the best of our knowledge, no prior study has specifically assessed CS-related knowledge, attitudes, and perceptions among women attending the antenatal clinic of the FMC, Asaba. This study, therefore, aimed to determine the knowledge, attitude, and perception of antenatal clinic attendees at FMC Asaba towards caesarean section, and to identify sociodemographic factors significantly associated with their attitude.

Materials and Methods

Study Area

This study was conducted at the Antenatal Clinic of the Department of Obstetrics and Gynaecology, Federal Medical Centre, Asaba, Delta State, Nigeria. FMC Asaba is situated in Oshimili South Local Government Area in the South-South geopolitical zone of Nigeria. It provides 24-hour primary, secondary, and tertiary healthcare services and functions as a referral centre for Delta State and its environs. The antenatal clinic operates Monday to Friday and registers approximately 1000 new bookings annually.

Study Design

A descriptive cross-sectional study design was employed to achieve the objectives of this study.

Study Population and Eligibility Criteria

The study population comprised all pregnant women who booked for and attended antenatal care at FMC Asaba between 1st March and 31st May 2024. Women who provided written informed consent were included. Women who declined consent or who had already been scheduled for elective caesarean section were excluded.

Sample Size Determination

The minimum sample size was calculated using the formula $N = z^2pq/d^2$, where $z = 1.96$ (95% confidence level), $p = 0.785$ (prevalence of good CS knowledge reported by Maitanmi et al.¹⁴, $q = 0.215$, and $d = 0.05$ (degree of precision), yielding $N = 259$. With a 10% non-response rate adjustment, the final target sample size was 285 participants.¹⁹

Data Collection and Instrument

Data were collected using a structured, self-administered questionnaire adapted from instruments used in comparable published studies and reviewed by experts in Obstetrics and Gynaecology. The questionnaire comprised four sections: (i) sociodemographic characteristics; (ii) knowledge of CS, comprising nine yes/no items each scored one point for a correct response (good knowledge: >70%, average knowledge: 50-70%, and poor knowledge: <50%); (iii) perception of CS, comprising 13 items on a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) converted to percentage scores (poor perception: <50%, and good perception: 50% and above); and (iv) attitude towards CS, comprising seven items similarly scored (negative attitude: <50%, and positive attitude: 50% and above). A pre-test carried out at Asaba Specialist Hospital in Asaba, Delta State among 30 pregnant women confirmed face validity and the absence of item ambiguity. All data were anonymised at the point of collection and stored on a password-protected computer accessible only to the principal investigator.

Data Analysis

Data were entered and analysed using IBM SPSS Statistics version 26. Categorical variables were summarised as frequencies and percentages; continuous variables that were normally distributed were expressed as mean and standard deviation.

Associations between categorical variables were assessed using the chi-square test or Fisher's exact test, the latter applied where expected cell counts were less than five. Statistical significance was set at $p < 0.05$.

Ethical Consideration

Ethical approval was obtained from the Human Research Ethics Commission of the Federal Medical Centre, Asaba, with approval number FMC/ASB/A81 VOL. XII/416 and dated 15th February 2024, before commencement of the study. The study was conducted in accordance with the Declaration of Helsinki. All participants provided written informed consent before enrolment, and participation was entirely voluntary.

Results

A total of 290 pregnant women consented to participate and returned fully completed questionnaires, representing a participation rate of 51.8% of the approximately 560 women who booked for antenatal care at FMC Asaba during the study period. The questionnaire completion rate among participants was 100%.

Table 1: Sociodemographic Characteristics of Respondents

Variable	Frequency (n=290)	Percentage (%)
Age Group		
Mean age (years) (SD)	31.58±5.69	
< 20 years	2	0.7
21-30 years	138	47.6
31-40 years	129	44.5
>=41 years	21	7.2
Occupation		
Unskilled	191	65.9
Skilled	99	34.1
Level of Education		
No Formal Education	2	0.7
Primary Education	6	2.1
Secondary Education	27	9.3
Tertiary Education	255	87.9
Religion		
Christianity	282	97.2
Islam	4	1.4
African Traditional Religion	4	1.4
Marital Status		
Single	14	4.8
Married	273	94.1
Separated	3	1.0
Tribe		
Igbo	178	61.4
Isoko	13	4.5
Ukwuani	27	9.3
Urhobo	19	6.6
Others	53	18.3
Parity		
Nullipara	111	38.3
Primipara	87	30.0
Multipara	92	31.7
Previous Mode of Delivery		
Nil	111	38.3
Vaginal Delivery	135	46.6
Caesarean Section	44	15.2

Table 1 shows the sociodemographic profile of respondents. The mean age was 31.58 ± 5.69 years, with the 21-30 years age group forming the largest cohort 138 (47.6%). The majority of the respondents were of the Igbo ethnic group 178 (61.4%), married 273 (94.1%), Christians 282 (97.2%) and had a tertiary level of education. Nulliparous women formed the largest parity subgroup 111 (38.3%), while 135 (46.6%) of the respondents had a prior vaginal delivery.

Table 2: Knowledge of Respondents about Caesarean Section

Knowledge Item	Yes N (%)	No N (%)
Can a woman have a vaginal delivery after a previous CS?	270 (93.1)	20 (6.9)
Is it normal for a woman to give birth through a CS?	242 (83.4)	48 (16.6)
Can CS limit the number of children a woman can have?	204 (70.3)	86 (29.7)
Is CS done due to complications during pregnancy or delivery?	200 (69.0)	90 (31.0)
Can CS lead to bladder or urinary problems?	87 (30.0)	203 (70.0)
Will CS prevent future sexual problems for the mother?	26 (9.0)	264 (91.0)
Does a woman's health status determine her mode of delivery?	247 (85.2)	43 (14.8)
Do mothers recover sooner after CS than after vaginal delivery?	60 (20.7)	230 (79.3)
Compared with vaginal delivery, is CS safer for the baby?	140 (48.3)	150 (51.7)

Values represent the number of respondents and column percentages.

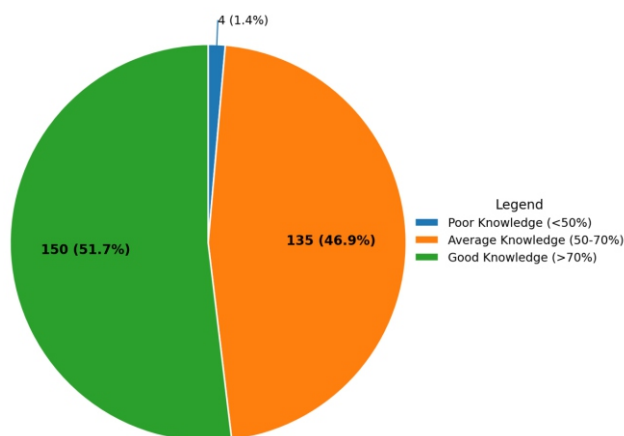


Figure 1: Overall knowledge level of respondents (n = 290)

Table 2 and figure 1 present knowledge responses and overall knowledge levels. About 51.7% of the respondents had a good level of knowledge about caesarean section. The most accurately answered items were the possibility of vaginal birth after prior CS and the role of a woman's health status in determining the mode of delivery.

Table 3: Perception of Caesarean Section among Respondents

Perception Item	SD N(%)	D N(%)	U N(%)	A N(%)	SA N(%)
Women who deliver through CS miss an important life experience	96 (33.1)	81 (27.9)	51 (17.6)	34 (11.7)	28 (9.7)
CS creates a more affectionate mother-baby relationship	64 (22.1)	85 (29.3)	99 (34.1)	26 (9.0)	16 (5.5)
CS is performed for weak women	139 (47.9)	68 (23.4)	24 (8.3)	34 (11.7)	25 (8.6)
CS is a safe procedure	5 (1.7)	29 (10.0)	49 (16.9)	115 (39.7)	92 (31.7)
CS reduces a woman's dignity	171 (59.0)	72 (24.8)	13 (4.5)	13 (4.5)	21 (7.2)
CS prevents mother and child bonding	156 (53.8)	74 (25.5)	33 (11.4)	4 (1.4)	23 (7.9)
CS is preferable because vaginal delivery pain is unpleasant	81 (27.9)	81 (27.9)	69 (23.8)	35 (12.1)	24 (8.3)
Babies born by CS are healthier than those by vaginal delivery	141 (48.6)	96 (33.1)	37 (12.8)	0 (0.0)	16 (5.5)
Previous CS means all future deliveries will be by CS	49 (16.6)	117 (40.3)	54 (18.6)	51 (17.6)	19 (6.6)
CS causes an unusually long hospital stay	22 (7.6)	79 (27.2)	25 (8.6)	125 (43.1)	39 (13.4)
CS helps prevent maternal and neonatal death	25 (8.6)	41 (14.1)	26 (9.0)	107 (36.9)	91 (31.4)
Husbands should be the ones to give consent for CS	47 (16.2)	81 (27.9)	36 (12.4)	89 (30.7)	37 (12.8)
CS could make mothers feel less confident in their ability to give birth	66 (22.8)	100 (34.5)	47 (16.2)	49 (16.9)	28 (9.7)

SD = Strongly Disagree; D = Disagree; U = Undecided; A = Agree; SA = Strongly Agree.

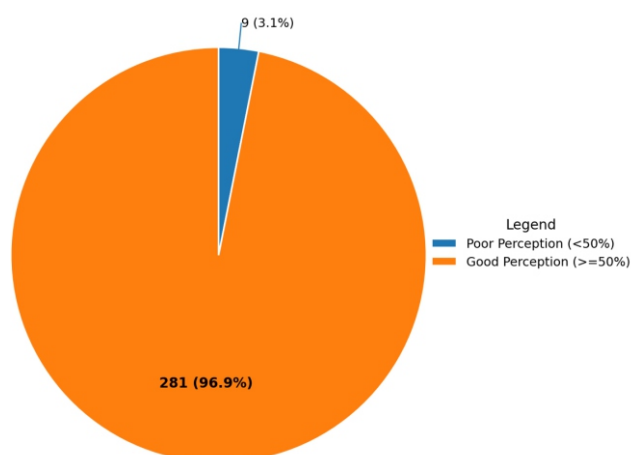
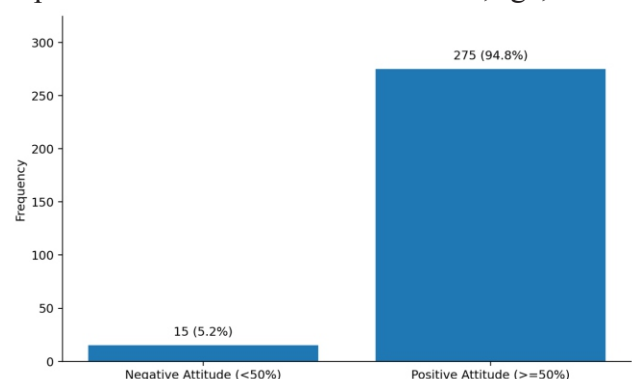
**Figure 2: Overall perception level of respondents (n = 290)**

Table 3 and figure 2 present perception responses and overall perception levels. About 96.9% of the respondents had a good perception of caesarean section.

Table 4 and figure 3 present attitude responses and overall attitude levels. Most respondents disagreed or strongly disagreed that CS is an abnormal mode of delivery, embarrassing, or culturally unacceptable. Willingness to undergo CS if medically indicated was expressed by 62.8% of respondents, while 58.3% of the respondents considered CS important in reducing mortality. Notably, 237 (81.7%) considered CS very expensive. Overall, 94.8% of respondents held a positive attitude towards CS.

Table 5 shows the association between sociodemographic variables and attitude towards CS. Whereas occupation ($p = 0.004$), parity ($p < 0.001$), and previous mode of delivery ($p < 0.001$) were significantly associated with the attitude of the respondents towards caesarean section, age, level of

**Figure 3: Overall attitude level of respondents (n = 290)****Table 4: Attitude of Respondents towards Caesarean Section**

Attitude Item	SD N(%)	D N(%)	U N(%)	A N(%)	SA N(%)
It is my right to choose CS even without a medical indication	24 (8.3)	37 (12.8)	38 (13.1)	120 (41.4)	71 (24.5)
CS is an abnormal mode of delivery	110 (37.9)	90 (31.0)	22 (7.6)	37 (12.8)	31 (10.7)
CS is not accepted in my culture or religion	110 (37.9)	83 (28.6)	35 (12.1)	32 (11.0)	30 (10.3)
I am willing to undergo CS if medically indicated	39 (13.4)	30 (10.3)	39 (13.4)	115 (39.7)	67 (23.1)
I consider CS important in reducing maternal and infant mortality	25 (8.6)	53 (18.3)	43 (14.8)	71 (24.5)	98 (33.8)
CS can be embarrassing	145 (50.0)	77 (26.6)	31 (10.7)	13 (4.5)	24 (8.3)
I consider CS very expensive	9 (3.1)	11 (3.8)	33 (11.4)	126 (43.4)	111 (38.3)

SD = Strongly Disagree; D = Disagree; U = Undecided; A = Agree; SA = Strongly Agree.

education, religion, marital status, and tribe were not significantly associated with their attitude ($p > 0.05$).

Discussion

This study assessed the knowledge, attitude, and perception of pregnant women attending antenatal care at a public tertiary facility in South-South Nigeria towards caesarean section, and identified sociodemographic correlates of attitude.

Table 5: Association between Sociodemographic Characteristics and Attitude towards Caesarean Section

Variable	Negative N(%)	Positive N(%)	chi2	P-value
Age Group				
≤20 years	0 (0.0)	2 (100.0)	2.464F	0.430
21-30 years	8 (5.8)	130 (94.2)		
31-40 years	5 (3.9)	124 (96.1)		
≥41 years	2 (9.5)	19 (90.5)		
Occupation				
Unskilled	15 (7.9)	176 (92.1)	8.199	0.004*
Skilled	0 (0.0)	99 (100.0)		
Level of Education				
No Formal Education	0 (0.0)	2 (100.0)	1.841F	0.594
Primary Education	0 (0.0)	6 (100.0)		
Secondary Education	0 (0.0)	27 (100.0)		
Tertiary Education	15 (5.2)	240 (94.1)		
Religion				
Christianity	15 (5.3)	267 (94.7)	0.470F	>0.999
Islam	0 (0.0)	4 (100.0)		
African Traditional Religion	0 (0.0)	4 (100.0)		
Marital Status				
Single	0 (0.0)	14 (100.0)	0.536F	>0.999
Married	15 (5.5)	258 (94.5)		
Separated	0 (0.0)	3 (100.0)		
Tribes				
Igbo	11 (6.2)	167 (93.8)	8.072F	0.051
Isoko	0 (0.0)	13 (100.0)		
Ukwuani	4 (14.8)	23 (85.2)		
Urhobo	0 (0.0)	19 (100.0)		
Others	0 (0.0)	53 (100.0)		
Parity				
Nullipara	14 (12.6)	97 (87.4)	19.182F	<0.001*
Primipara	1 (1.1)	86 (98.9)		
Multipara	0 (0.0)	92 (100.0)		
Previous Mode of Delivery				
Nil	14 (12.6)	97 (87.4)	20.645	<0.001*
Vaginal Delivery	0 (0.0)	135 (100.0)		
Caesarean Section	1 (2.3)	43 (97.7)		

Note: F = Fisher's exact test was used where the expected cell-count assumptions for Pearson's chi-square test were not met, specifically when more than 20% of expected cell counts were less than 5 or where any expected cell count was less than 1. *Statistically significant ($p < 0.05$).

Taken in aggregate, the findings portray a population that is broadly informed, largely accepting, and favourably disposed towards CS, a profile that stands in instructive contrast to the literature from rural and community-based settings across Nigeria and West Africa.

The overall rate of good knowledge in this study was 51.7%; when respondents with average knowledge are included, 98.6% demonstrated at least average CS knowledge, leaving only 1.4% with poor knowledge. This finding is concordant with that of Maitanmi et al.¹⁴, who reported good CS knowledge among pregnant women attending a faith-based tertiary institution in Ogun State; the shared profile of urban tertiary attendance and high educational attainment between that study and the current one provides a ready explanation for their agreement. Aziken et al.¹⁵, in a widely cited study conducted in urban Benin, similarly found that women at a tertiary facility demonstrated sound CS understanding, attributing this to the educational and social capital concentrated in urban healthcare settings. Panti et al.¹⁶ corroborated these findings in

Sokoto, demonstrating that even in a geographically and culturally distinct part of Nigeria, tertiary antenatal attendance was associated with adequate CS knowledge, underscoring the institution rather than geography as the primary driver. Abazie et al.¹⁷ arrived at similar conclusions, and Prah et al.²⁰ in Cape Coast, Ghana, extended this pattern across national borders, suggesting that the urban tertiary antenatal setting creates a shared knowledge environment for CS awareness that transcends ethnic and national variation across West Africa.

Where the literature diverges from the current findings is in populations from less educationally endowed or less urbanised contexts. Ashimi et al.¹⁸, studying women in a semi-urban community in Northwest Nigeria, documented considerably lower CS knowledge, attributing this to limited formal education and reduced exposure to structured antenatal education, conditions that are the obverse of those in the current study. Afaya et al.²¹ found a comparable deficit in Northern Ghana, where even

health facility attendees demonstrated limited understanding of CS indications and complications, suggesting that facility attendance alone is insufficient without the sustained, content-rich counselling characteristic of tertiary care. Yaqoub et al.²² in Jeddah, Saudi Arabia, found that complication-specific CS knowledge remained poor even in a high-income context, reinforcing the point that socioeconomic development alone does not guarantee CS literacy without deliberate educational investment. These contrasting results confirm that the current study's favourable knowledge profile reflects the exceptional educational composition of the sample rather than any inherent attitudinal characteristic of South-South Nigeria.

The item-level analysis reveals that aggregate good knowledge scores can mask clinically critical deficits. Only 30.0% of respondents could correctly identify that CS can cause bladder or urinary tract injury, a finding that Yaqoub et al.²² similarly encountered in their Saudi cohort, where CS complications were the single least understood

domain. This gap persists in the current study despite high educational attainment, pointing to a specific counselling deficit rather than a generalised educational one. Fewer than half of respondents (48.3%) regarded CS as comparatively safer for the baby than vaginal delivery, a perception that may become a barrier to acceptance precisely in scenarios where CS is indicated to avert foetal compromise, including obstructed labour and malpresentation.

The positive attitude rate of 94.8% is among the highest in the Nigerian literature. Naa Gandau et al.²³ reported positive maternal perceptions of CS's role in averting perinatal mortality in the Upper West Region of Ghana, aligning with the 58.3% of respondents in the current study who agreed or strongly agreed that CS reduces maternal and infant mortality. Dorkenoo et al.²⁴ similarly documented favourable attitudes among obstetric unit attendants in a Ghanaian teaching hospital, reinforcing the pattern that urban teaching hospital populations hold more accommodating views of operative delivery. These concordant findings across West Africa support the conclusion that structured tertiary antenatal contact is a reliable predictor and likely active mediator of positive CS attitudes.

These findings stand in direct contrast to those of Ezeonu et al.²⁵, whose study at a rural missionary hospital in Abakaliki, Southeast Nigeria, documented negative attitudes among pregnant women. It is instructive that two studies conducted in geographically adjacent parts of Southern Nigeria should yield such divergent attitudinal profiles: Ezeonu et al.²⁵ attributed the negative attitudes in their sample to rural cultural resistance and limited formal education, factors conspicuously absent in the current cohort. Amiegheme et al.²⁶ reported similar findings at a missionary hospital in Edo State, observing that the spiritually oriented institutional culture of their facility reinforced community-derived suspicion of operative delivery. Chiamaka et al.²⁷ explicitly attributed the entrenched cultural beliefs against CS in their rural Southwest Nigerian sample to rural residence and low educational attainment, a conclusion directly supported by the contrast with the current study. Maduka et al.²⁸ conducted the most geographically proximate study to the current one in a secondary health facility in Agbor, a semi-urban area of Delta

State, examining CS perceptions in South-South Nigeria, yet reported negative attitudes despite the shared regional context and even though the CS procedure was being offered at no cost to pregnant women. The divergence between these two South-South populations demonstrates unambiguously that within South-South Nigeria, facility type, urban-rural gradient and educational attainment are more powerful determinants of CS attitude than regional or cultural identity.

The significant association between parity and attitude is among the most clinically interpretable findings. Negative attitude was documented in 12.6% of nulliparous women, fell to 1.1% among primiparous women, and was absent among multiparous women. Women who have experienced delivery carry embodied knowledge that no antenatal session can fully replicate, and repeated healthcare exposure through successive pregnancies appears to progressively erode residual CS-related anxieties. This observation is congruent with the findings of Yunitawati et al.²⁹ in Indonesia, who demonstrated that higher parity was independently associated with CS acceptance after adjustment for educational attainment, suggesting that obstetric experience modifies attitude through mechanisms distinct from formal education. The concentration of all negative attitudes within the nulliparous and unskilled worker subgroups identifies these as priority targets for intensified antenatal counselling, with peer-facilitated sessions drawing on the experience of multiparous women as a potentially high-yield educational strategy.

A finding that transcends the attitudinal domain and must be read as a structural access problem is the 81.7% of respondents who considered CS to be very expensive. A woman who accepts the legitimacy of CS in principle may nonetheless delay or decline it when confronted with its cost in an emergency. Nigeria's predominantly out-of-pocket health financing model renders catastrophic costs for many households, and despite its expanded mandate, the National Health Insurance Authority (NHIA) has not yet achieved sufficient coverage in Nigeria to offset this burden meaningfully. Programmes aimed at improving CS utilisation must therefore address financial access alongside educational and attitudinal interventions.

Within the perception domain, the strong rejection

of the belief that CS reduces a woman's dignity (83.8% disagreed or strongly disagreed) and that it impairs mother-baby bonding (79.3%) represents a clear departure from the findings of Amiegheme et al.²⁶, Chiamaka et al.²⁷ and Maduka et al.²⁸, all of whom found these beliefs prevalent and strongly held. Maitanmi et al.¹⁴ and Panti et al.¹⁶ similarly reported favourable perceptions among urban tertiary populations, and together with the current study, they constitute a coherent body of evidence that high educational attainment and structured tertiary antenatal exposure are the conditions under which dignity- and bonding-related CS stigma is most effectively eroded.

Two perception constructs warrant specific clinical and ethical attention. First, the finding that 43.5% agreed or strongly agreed that husbands should give consent for CS reveals the persistence of patriarchal reproductive decision-making frameworks even within this educated cohort. In clinical practice, any arrangement conditioning a woman's access to emergency CS on spousal presence or agreement creates a delay mechanism that is potentially fatal in time-critical situations, including cord prolapse and uterine rupture. Nigerian law vests informed consent in the competent adult patient, and obstetric teams must be equipped to assert maternal autonomy unambiguously in emergency encounters. Second, the 56.5% who agreed or strongly agreed that CS is associated with an unusually prolonged hospital stay may develop anticipatory reluctance to accept the procedure. Where this perception exceeds evidence-based expectations, counselling on realistic post-CS recovery timelines, including accelerated recovery pathways now standard in many tertiary units is warranted.

This study has several limitations. The single-centre, urban tertiary design limits generalisability to rural, community-based, or primary healthcare settings where CS attitudes differ substantially. The very high proportion of tertiary-educated respondents (87.9%) renders the sample unrepresentative of the broader Nigerian female population. Social desirability bias in a clinical setting may have inflated positive attitude and perception rates. The cross-sectional design precludes causal inference regarding the determinants of knowledge, attitude, and

perception.

Conclusion

Women attending antenatal care at the Federal Medical Centre, Asaba, demonstrated predominantly good knowledge, positive attitude, and good perception towards caesarean section. Occupation, parity, and previous mode of delivery were the sociodemographic variables significantly associated with attitude towards CS. Specific and clinically consequential gaps persisted: knowledge of CS complications is deficient even in this educated cohort, the perception of financial inaccessibility constitutes a material barrier to uptake, patriarchal constructs around spousal consent remain prevalent, and residual dignity-related stigma has not been fully extinguished. Each of these represents a specific, addressable point of intervention within the antenatal care encounter and within the broader health system.

Recommendation

Antenatal health workers at FMC Asaba and comparable tertiary facilities should intensify counselling on the specific intraoperative and postoperative complications of caesarean section, including bladder injury, wound morbidity, and realistic recovery timelines. Antenatal education should explicitly address the legal and ethical primacy of maternal informed consent in CS decision-making, dismantling the misconception that spousal consent is required. Nulliparous women and unskilled workers should be prioritised as counselling subgroups, given their disproportionate prevalence of negative attitudes. Peer-support models drawing on the experience of multiparous women who have undergone CS should be explored as complementary educational tools. At the health policy level, expanded enrolment under the National Health Insurance Authority (NHIA) and facility-level cost transparency are essential to converting positive attitudes into timely CS utilisation. Multicentre studies across rural, semi-urban, and primary healthcare facility populations are strongly recommended to generate a nationally representative evidence base.

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Authors Contribution

S.O.I, H.O.O, C.O.I: Conceptualisation and study design, writing original draft, data collection, data analysis, interpretation, drafting, and critical review for intellectual content.

S.E.J, N.R.M, N.P.O, O.Z.I, C.O, S.S.A: Data collection, data interpretation and analysis, drafting and critical review for intellectual content.

All authors gave their consent for the final version to be published and agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Conflict of Interest

The authors declare no conflict of interest.

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