



SOCIO-CULTURAL AND ECONOMIC DRIVERS OF CAESAREAN SECTION HESITANCY AMONG PREGNANT WOMEN ATTENDING A TERTIARY HOSPITAL IN SOUTHERN NIGERIA

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Abstract

Caesarean section (CS) is a life-saving obstetric intervention that reduces maternal and neonatal morbidity and mortality when vaginal delivery presents significant risks. Despite increasing awareness of its benefits, the acceptance of medically indicated Caesarean delivery remains a challenge in many low- and middle-income countries, including Nigeria. This study examined the socio-cultural and economic drivers of Caesarean Section Hesitancy among pregnant women attending antenatal clinic at the University of Benin Teaching Hospital, Benin City, Nigeria. A descriptive cross-sectional survey design was adopted, and data were collected from 150 pregnant women (this study was conducted from August-September, 2025) using a structured questionnaire. Descriptive statistics and Pearson's Chi-square test were used for data analysis at a significance level of $p < 0.05$. Findings revealed that 50.0% of respondents had good knowledge of Caesarean section, while 60.0% expressed willingness to accept medically indicated Caesarean delivery. However, the fear of adverse outcomes (68.0%), financial constraints (65.3%), and family-related beliefs (52.7%) emerged as major barriers to acceptance. A statistically significant relationship was observed between the knowledge and acceptance of Caesarean section ($\chi^2 = 8.806$; $p = 0.013$), indicating that women with better knowledge were more likely to accept the procedure. The findings demonstrate that knowledge alone does not guarantee acceptance, as social and economic influences continue to shape maternal decision-making. Addressing these barriers through antenatal education, family-centered counseling, and financial protection could enhance acceptance of medically indicated Caesarean delivery and improve maternal health outcomes in Nigeria.

Keywords: Caesarean section, maternal health, acceptance, hesitancy, socio-cultural factors, Nigeria.

Introduction

Maternal mortality continues to represent a significant global health challenge despite substantial improvements in maternal healthcare services and obstetric practice. Despite improvements in maternal healthcare globally, substantial disparities persist across regions, with low- and middle-income countries continuing to bear a disproportionate burden of maternal mortality (Betrán et al., 2021; World Health Organization, 2018).

Nigeria bears a disproportionate share of this burden and remains among the countries with the highest maternal mortality ratios globally. Most maternal deaths in the country are attributable to preventable obstetric complications, including postpartum haemorrhage, obstructed labour, hypertensive disorders of

pregnancy, sepsis, and unsafe abortion, many of which require timely access to comprehensive emergency obstetric care for effective management (Famutimi et al., 2026).

Caesarean section (CS) is one of the most important interventions in modern obstetric care and is widely recognized as an essential component of comprehensive emergency obstetric services. The procedure is performed when vaginal delivery poses significant risks to maternal or fetal health and has contributed substantially to reducing maternal and neonatal morbidity and mortality worldwide (Betrán et al., 2021). Appropriate utilization of Caesarean delivery has been associated with reductions in adverse outcomes arising from obstructed labour, fetal distress, cephalopelvic disproportion, placenta previa, severe hypertensive disorders, and other obstetric complications. Consequently, access to safe Caesarean section is increasingly regarded as a key indicator of maternal healthcare quality and health system responsiveness (Betrán et al., 2021).

Despite its clinical importance, acceptance of Caesarean section remains problematic in many low- and middle-income countries. Existing evidence suggests that maternal healthcare decisions are influenced by factors that extend beyond medical necessity and clinical recommendations. Across several African settings, women frequently delay, resist, or refuse Caesarean delivery even when healthcare providers identify the procedure as the safest option for maternal and fetal survival (Dorkenoo & Abor, 2021; Maduka & Enaruna, 2021). Such delays have important implications because maternal outcomes in obstetric emergencies are often determined by the timeliness of decision-making and access to appropriate interventions (Businge et al., 2025).

Studies conducted in Nigeria and other sub-Saharan African countries have reported relatively high awareness of Caesarean delivery alongside persistent reluctance toward undergoing the procedure when medically indicated (Maduka & Enaruna, 2021; Maitanmi et al., 2023). This apparent disconnect suggests that maternal decision-making is shaped by a broader set of social, economic, and behavioural influences. Women may recognize the life-saving value of Caesarean delivery while simultaneously expressing concerns regarding surgical risks, financial consequences, social perceptions, and family expectations.

Within many Nigerian communities, childbirth is not viewed solely as a clinical event but also as a socially and culturally significant experience. Societal expectations often associate successful motherhood with spontaneous vaginal birth, while Caesarean delivery may be perceived as evidence of reproductive inadequacy or personal failure (Maduka & Enaruna, 2021; Ogunkorode et al., 2023).

For many families in Nigeria, the cost of Caesarean delivery extends beyond surgical fees to include medications, laboratory investigations, hospital admission, transportation, and postoperative care. These financial obligations may discourage timely acceptance of medically indicated procedures, particularly among households with limited economic resources. Previous studies have identified financial constraints as a major determinant of delayed healthcare-seeking behaviour and poor utilization of emergency obstetric services (Shibre et al., 2020; Adewuyi et al., 2024).

Therefore, this study examined the socio-cultural and economic drivers of caesarean section hesitancy among pregnant women attending antenatal clinic at the University of Benin Teaching Hospital, Benin City, Nigeria, and explored the relationship between knowledge and acceptance of medically indicated Caesarean delivery.

Materials and methods

Study Design and Setting

This study adopted a descriptive cross-sectional survey design to examine knowledge, acceptance, and determinants of Caesarean section among pregnant women attending antenatal clinic at the University of Benin Teaching Hospital (UBTH), Benin City, Edo State, Nigeria. The design was considered appropriate because it enabled the assessment of respondents' knowledge and perceptions of Caesarean section as well as factors influencing acceptance of medically indicated Caesarean delivery at a single point in time. UBTH is a major tertiary healthcare institution that provides comprehensive maternal and child health services and serves as a referral centre for Edo State and neighbouring states.

Population, Sample Size, and Sampling Technique

The study population comprised of pregnant women attending antenatal clinic at UBTH during the study period (the study was conducted from August-September, 2025). According to antenatal clinic records, a total number of 205 pregnant women were registered at the time of the study. The sample size was determined using Taro Yamane's formula for finite populations, yielding a minimum sample size of 136 respondents (Yamane, 1967).

The Yamane formula is given by: $n = N / (1 + Ne^2)$.

Where N = population size (205), and
 e = alpha level, i.e. $e = 0.05$ at confidence interval of 95%.

$$\begin{aligned}\text{Therefore, } n &= 205 / [1 + 205(0.05)^2] \\ &= 205 / [1 + 205(0.0025)] \\ &= 205 / [1 + 0.51] \\ &= 205 / 1.51 \\ &= 136\end{aligned}$$

To account for possible non-response, an additional 10% was added, resulting in a final sample size of 150 participants.

A convenience sampling technique was employed to recruit eligible pregnant women who attended antenatal clinic during data collection and consented to participate. Recruitment continued until the required sample size was achieved.

Instrument for Data Collection

Data were collected using a structured questionnaire developed from relevant literature on Caesarean section knowledge, acceptance, and maternal healthcare decision-making. The questionnaire consisted of four sections. Section A collected socio-demographic information, including age, educational level, parity, family setting, and occupation. Section B assessed knowledge of Caesarean section, while Section C examined respondents' acceptance of medically indicated Caesarean delivery. Section D explored factors influencing acceptance, including socio-cultural, economic, religious, and family-related considerations.

Validity and Reliability

Content validity of the instrument was established through expert review by specialists in maternal health nursing, obstetrics, and research methodology. Their recommendations were incorporated into the final version of the questionnaire. Reliability was assessed through a pilot study involving 15 pregnant women outside the study setting. The instrument yielded a Cronbach's alpha coefficient of 0.77, indicating acceptable internal consistency.

Data Collection Procedure

Following ethical approval and informed consent, questionnaires were administered to eligible respondents during routine antenatal clinic sessions. Participants completed the questionnaires independently, while the researcher and trained research assistants provided clarification where necessary. Completed questionnaires were retrieved immediately and checked for completeness. All 150 questionnaires distributed were returned, resulting in a response rate of 100%.

Data Analysis

Data were coded and analysed using the Statistical Package for the Social Sciences (SPSS, version 28.0, IBM, Chicago, IL, USA). Descriptive statistics, including frequencies and percentages, were used to summarize respondents' characteristics and study variables. Pearson's Chi-square test was used to determine the relationship between knowledge and acceptance of Caesarean section, with statistical significance set at $p < 0.05$.

Ethical Considerations

Ethical approval was obtained from the University of Benin Teaching Hospital Research Ethics Committee (ADM/E22/A/VOL.VII/1486549125539). Participation was voluntary, and written informed consent was obtained from all respondents. Confidentiality and anonymity were maintained throughout the study, and participants were informed of their right to withdraw at any stage without any consequences.

Results

150 questionnaires were completed and analysed, representing a response rate of 100%. The mean age of respondents was 32.4 ± 8.1 years.

Socio-demographic Characteristics

The socio-demographic characteristics of respondents are presented in Table 1. Most respondents were aged 28–37 years (34.7%), had secondary education (48.0%), belonged to monogamous households (70.6%), and were self-employed (50.0%).

Table 1. Socio-demographic characteristics of respondents (N = 150)

Variable	Category	Frequency(N)	Percentage (%)
Age (years)	18–27	44	29.3
	28–37	52 (34.7)	52 (34.7)
	38–47	42 (28.0)	42 (28.0)

Variable	Category	Frequency(N)	Percentage (%)
	>47	12 (8.0)	12 (8.0)
Educational level	No formal education	15 (10.0)	15 (10.0)
	Primary	30 (20.0)	30 (20.0)
	Secondary	72 (48.0)	72 (48.0)
	Tertiary	33 (22.0)	33 (22.0)
Family setting	Monogamous	106 (70.6)	106 (70.6)
	Polygamous	44 (29.4)	44 (29.4)
Occupation	Civil servant	42 (28.0)	42 (28.0)
	Student	27 (18.0)	27 (18.0)
	Self-employed	75 (50.0)	75 (50.0)
	Unemployed	6 (4.0)	6 (4.0)

Knowledge of Caesarean Section

75 (50.0%) respondents demonstrated good knowledge of Caesarean section, while 50 (33.3%) and 25 (16.7%) exhibited moderate and poor knowledge, respectively (Table 2).

Table 2. Knowledge of Caesarean section among respondents(N = 150)

Knowledge level	n (%)
Good	75 (50.0)
Moderate	50 (33.3)
Poor	25 (16.7)
Total	150 (100.0)

Acceptance of Medically Indicated Caesarean Section

Ninety respondents (60.0%) reported willingness to accept Caesarean section when medically indicated, whereas 60 (40.0%) indicated unwillingness to undergo the procedure (Table 3).

Table 3. Acceptance of medically indicated Caesarean section(N = 150)

Response	n (%)
Accept	90 (60.0)
Do not accept	60 (40.0)
Total	150 (100.0)

Determinants of Caesarean Section Hesitancy

Fear of adverse outcomes recorded the highest mean score (Mean = 3.42, SD = 0.71), ranking first among the determinants of Caesarean Section Hesitancy. This was followed by financial constraints

(Mean = 3.31, SD = 0.76) and family-related beliefs (Mean = 3.08, SD = 0.84). Religious beliefs (Mean = 2.11, SD = 0.93) and cultural beliefs (Mean = 1.87, SD = 0.88) had comparatively lower mean scores and ranked fourth and fifth, respectively.

Table 4. Determinants of Caesarean Section Hesitancy(N = 150)

Determinant	Mean	Standard Deviation	Ranking
Fear of adverse outcomes	3.42	0.71	1
Financial constraints	3.31	0.76	2
Family-related beliefs	3.08	0.84	3
Religious beliefs	2.11	0.93	4
Cultural beliefs	1.87	0.88	5

Decision Rule: Mean $\geq$ 2.50 = Agreed determinant; Mean $<$ 2.50 = Not a major determinant.

Association between Knowledge and Acceptance of Caesarean Section

Acceptance of Caesarean section increased with higher levels of knowledge (Table 5). Pearson's Chi-square analysis demonstrated a statistically significant association between knowledge and acceptance of Caesarean section ($\chi^2 = 8.806$, df = 2, p = 0.013). The effect size was small-to-moderate (Cramer's V = 0.24).

Table 5. Association between Knowledge and Acceptance of Caesarean Section (N = 150)

Knowledge level	Accepted n (%)	Not accepted n (%)	Total
Good	52 (69.3)	23 (30.7)	75
Moderate	29 (58.0)	21 (42.0)	50
Poor	9 (36.0)	16 (64.0)	25

Table 6. Association between Knowledge and acceptance of Caesarean Section(N = 150)

Variable	χ^2	df	p-value	Cramer's V
Knowledge and acceptance of Caesarean section	8.806	2	0.013	0.24

Acceptance of medically indicated Caesarean section was significantly associated with respondents' level of knowledge ($\chi^2 = 8.806$, p = 0.013). The effect size (Cramer's V = 0.24) indicated a small-to-moderate

association. A statistically significant association was observed between knowledge and acceptance of medically indicated Caesarean section ($\chi^2 = 8.806$, $df = 2$, $p = 0.013$). The effect size was small-to-moderate (Cramer's $V = 0.24$), indicating a meaningful relationship between the two variables.

Discussion

This study investigated the socio-cultural and economic drivers of Caesarean Section Hesitancy among pregnant women in Southern Nigeria. The findings revealed that knowledge of Caesarean section was relatively high, substantial hesitancy persisted, largely driven by fear of adverse outcomes, financial constraints, and family-related influences.

Despite relatively satisfactory knowledge levels, only 60% of respondents expressed willingness to accept medically indicated Caesarean delivery. Similar patterns have been reported across several African settings, where awareness of Caesarean section coexists with persistent reluctance toward its utilization (Maduka & Enaruna, 2021; Dorkenoo & Abor, 2021).

A particularly important contribution of this study is the identification of fear of adverse outcomes as the strongest determinant of Caesarean Section Hesitancy. More than two-thirds of respondents reported fear as a major barrier to acceptance. This finding aligns with evidence from previous studies indicating that Caesarean delivery is frequently associated with anxiety regarding surgical complications, maternal death, prolonged recovery, future fertility, and postoperative pain (Maduka & Enaruna, 2021; Adeosun et al., 2022). Such fears are often reinforced by negative community narratives and anecdotal experiences, which may exert greater influence on decision-making than clinical information provided during antenatal care.

Financial constraints emerged as another major determinant of acceptance. Nearly two-thirds (financial constraints (Mean = 3.31, SD = 0.76) of respondents identified cost as a barrier to undergoing Caesarean delivery. This finding reflects the broader realities of healthcare financing in Nigeria, where out-of-pocket expenditure remains the dominant mechanism for accessing healthcare services (Adewuyi et al., 2024; Shibre et al., 2020). Previous studies have demonstrated that economic barriers continue to influence utilization of maternal healthcare services, particularly emergency obstetric care, among women in low-resource settings (Adewuyi et al., 2024; Shibre et al., 2020). The financial implications of Caesarean delivery often extend beyond surgical fees to include medications, laboratory investigations, transportation, hospitalization, and postoperative care. Consequently, even when women recognize the medical necessity of Caesarean delivery, economic constraints may delay consent and contribute to adverse maternal outcomes.

The influence of family-related beliefs observed in this study further highlights the social nature of maternal healthcare decision-making. More than half (family-related beliefs (Mean = 3.08, SD = 0.84) of the respondents reported that family considerations affected their willingness to accept Caesarean delivery. This finding supports previous research suggesting that childbirth decisions in many African societies are strongly influenced by family expectations and social norms (Ogunkorode et al., 2023; Adewuyi et al., 2024). Husbands, mothers-in-law, and extended family members often play influential roles in determining healthcare choices during pregnancy and childbirth. As a result, women's decisions may be shaped not only by personal beliefs but also by family expectations and social norms. These findings suggest that interventions targeting only pregnant women may have limited effectiveness unless influential family members are also engaged in maternal health decision-making processes..

An important finding of the study was the statistically significant relationship between knowledge and acceptance of Caesarean section. Women with better knowledge were significantly more likely to accept medically indicated Caesarean delivery than those with lower knowledge levels. This finding is consistent with previous studies reporting positive associations between maternal health literacy and utilization of obstetric services (Dorkenoo & Abor, 2021; Simon et al., 2021). The result also aligns with the Theory of Planned Behaviour, which proposes that knowledge contributes to the formation of favourable attitudes and behavioural intentions (Ajzen, 1991). Nevertheless, the persistence of reluctance among some knowledgeable women indicates that knowledge alone does not fully explain maternal decision-making. Rather, acceptance appears to be influenced by the interaction of cognitive, social, and structural factors.

These findings highlight the need for interventions that move beyond conventional information-based approaches. While strengthening antenatal education remains important, educational interventions should be complemented by strategies that address fears, misconceptions, family influences, and financial barriers. Nurses, midwives, and other maternal healthcare professionals are particularly well positioned to provide individualized counseling that responds to the social and emotional concerns underlying caesarean section hesitancy. Similarly, expanding financial protection mechanisms for maternal healthcare may reduce economic barriers and improve timely acceptance of medically indicated obstetric interventions.

These findings underscore the need for a multidimensional approach to improving acceptance of Caesarean delivery, recognizing that maternal decisions are influenced by knowledge, family dynamics, and economic realities. Tackling these factors simultaneously may enhance timely access to life-saving obstetric interventions and improve maternal and neonatal outcomes in Nigeria.

However, the findings of this study should be interpreted in light of certain limitations. The study was conducted in a single tertiary healthcare facility, which may limit the generalizability of the results to other healthcare settings and populations. Additionally, the use of convenience sampling may have introduced selection bias. Data were obtained through self-reported questionnaires and were therefore subject to social desirability bias. Furthermore, the cross-sectional design precludes causal inferences between the identified factors and acceptance of Caesarean section. Despite these limitations, the study provides important insights into the socio-cultural and economic factors influencing Caesarean Section Hesitancy among pregnant women in Nigeria.

Conclusion

Caesarean Section Hesitancy represents an important behavioural challenge affecting the utilization of medically indicated Caesarean delivery among pregnant women in the study area. Beyond knowledge deficits, fear, financial constraints, and family influences substantially shape maternal decision-making. Addressing these interconnected barriers may improve timely access to life-saving obstetric care and contribute to reductions in preventable maternal and neonatal morbidity and mortality.

Competing Interests

The authors declare that there are no competing interests regarding the publication of this study.

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