Tropical Journal of Obstetrics & Gynaecology
ISSN-Print: 0189-5117
Online: 2543-148X
Official Publication of Society of Obstetrics & Gynaecology of Nigeria

■ Original Research Article

Perceptions and Attitudes of Pregnant Women Towards Caesarean Section in South-South Nigeria

Maduka Roy N[1]., Okubor Paul O[2].

Department(s) and institution(s)
1 Central hospital Agbor, Delta state Nigeria
2 Central Hospital Warri, Delta state Nigeria

Abstract

Background: When vaginal delivery is not possible, Caesarean section (CS) is indicated to avoid fetal and maternal mortality. Unfortunately, many of our pregnant women still have aversion to the procedure despite the improved safety. These have resulted in some preventable mortality. Aversion to CS has been attributed to Sociocultural factors and cost of surgery. **Materials and Methods**: This cross-sectional study surveyed 360 consecutive consenting antenatal clinic clients presenting for booking in Central Hospital, Agbor, Delta State, Nigeria. The women completed a questionnaire with sections on sociodemographic attributes, mode and outcome of last delivery, acceptance of CS as an option of delivery, fears of antenatal patients about CS and for patients who declined CS, their reasons for declining CS were sought. **Results:** Acceptance of CS in the study was high with about 91.1% of the study population accepting CS by choice or when indicated. Only 1.9% of the study population rejected CS even when indicated. The fears expressed by the participants regarding CS included postoperative pain, perceived Doctor's incompetence, fear of death and failure of womanhood. **Conclusion:** CS was offered free in this study. The high acceptance of CS could have resulted from mitigating the effect of cost. Despite the fact that CS was offered free, 1.9% of the participants still rejected the procedure totally. Rejecting a procedure like CS when indicated could be catastrophic. Health education and antenatal counselling is suggested to help in continuing to reduce the rejection of CS by our antenatal women and increase the uptake.

Corresponding Author:

Maduka Ngozi Roy
Central Hospital Agbor
Phone numbers:
+2348037264634
E-mail address:
roymaduka@yahoo.com

Key words: perceptions, Nigeria, free delivery

Introduction

Caesarean section (CS) is a surgical procedure in which incisions are made through a woman´s abdomen and her uterus to deliver one or more babies and removal of placenta and fetal membranes.[1] The indication for CS can either be of maternal or fetal reasons.

The incidence of CS as an option of delivery is steadily rising.[2] Improved skill in anaesthesia, availability of blood transfusion and antibiotics are among the reasons for the increased safety and uptake of CS as an option of delivery. Other factors responsible for the increase in CS rates are the decline in both operative vaginal delivery and vaginal breech delivery, fear of litigation in Obstetric practice, identification of at-risk mothers, and wider use of repeat CS in cases with previous Caesarean delivery.[2] Globally, there is a general increase in the rate of CS from 12% in 2000 to 21% in 2015 .[3] While some

countries have low CS rate indicative of reduced access to this life saving procedure, majority have a rate above the 10–15% range that is considered to be medically justifiable by the WHO. [4] In the United States of America, the CS rate from 2009 to 2019 was 31.7%.[5] On the other hand, the incidence is about 20 to 30% in most teaching hospitals in Nigeria .[6] Maduka et al reported CS rate of 27.97% at the Central Hospital Agbor.[7]

Apart from the increased safety of the procedure, better education and public enlightenment has helped in increasing the acceptability of the procedure by women and their families.[8] Due to the current safety of the procedure, several CS are done for various justifiable medical and non-medical indications with favorable outcomes. [9, 10] All these may have contributed to the increased rate of the procedure in both developed and developing countries of the world. Despite the global acceptance of CS as an option of delivery, in some developing countries like Nigeria, many pregnant women and their relations still have numerous negative perceptions regarding CS. In these settings, women who had Caesarean delivery were considered as weaklings and a reproductive failure and also regarded as a curse on an unfaithful woman, while vaginal delivery in such settings is considered as the proof of womanhood .[8,10-12] Other reasons adduced for the aversion to CS by women in developing countries include the morbidity and mortality from the procedure, prolonged hospital stay due to wound infection and perceived high cost of the procedure. [10,12]

The high cost of CS has been documented as a reason for women rejecting CS especially in settings without functional health insurance schemes as shown by Ezechi *et al*[13] in 2004 who reported that 66.5% of respondents in their study declined caesarean delivery due to high cost. High cost of CS was the basis for refusing the procedure in the study by Chigbu et al.[14] Similarly, in the work by Enabudoso *et al*[15] and Aziken *et al*[16] 23.5% and 19.8% of the study population respectively rejected CS for financial reasons. The cost of CS appears to be an obstacle for many women and families considering that most people live below the poverty line in Nigeria.[17] Hence it is pertinent to enquire what other factors are strong influencers of behavior regarding acceptance of CS as an option of delivery when the role of cost is relatively minimized. Most of the previous studies were conducted in settings where patients mostly paid out-of-pocket.

Central Hospital Agbor, where the present study was conducted, is a government funded secondary healthcare facility with an intervention to increase access to maternal and child healthcare in place with one of the components being free antenatal care and delivery. Therefore, this study is intended to focus attention on the current situation of perception and attitude towards CS in the setting of free access to antenatal care and delivery. We hope to be able to highlight the emerging barriers to appropriate decision-making for women who need to have CS in our environment.

Materials and Method:

Study Setting

Central Hospital, Agbor, was established in the year 1906. It is a 250-bedded hospital located in the South–South region of Nigeria. It provides general medical care and specialist services to indigenes of Delta State and neighboring parts of Edo State. The obstetrics and gynaecology department has two consultants who are both fellows of the National Postgraduate Medical College of Nigeria and the West African College of Surgeons. Training of medical officers and interns' forms part of the activities of the hospital. Central Hospital, Agbor, attracts a monthly antenatal booking of over two hundred women, and the delivery rate in the past 5 years has been approximately 2000/year with a CS rate of about 28%. The postnatal clinic attends to about fifty women per week. Agbor is a kingdom in Delta State, Nigeria, occupying a part which has boundary with Edo State. The people of Agbor town are Ika and they speak the Ika dialect of the Igbo language. Agbor has a population of about 67,000 people who are predominantly Christians of different denominations. Some of the indigenes practice African traditional religion, and there are a few migrant Hausa/Fulani Muslims. The main occupational activities of the indigenes of Agbor town are farming and trading. In November 2007, the Delta State Government introduced a free maternal health program. This intervention covers the cost of antenatal care, delivery including CS, postpartum, and postnatal care up to 6 weeks after delivery/birth, drugs, and other supplies, laboratory investigations as well as surgical management of ruptured ectopic pregnancy and blood transfusion. This program has been sustained to date by successive governments.

Study Design

A cross-sectional study that was conducted at the antenatal out-patient unit of the Department of Obstetrics and Gynaecology, Central Hospital, Agbor, Delta State, Nigeria from October to December 2022

Inclusion and exclusion criteria

The target population consisted of all women who came to book their pregnancies at the antenatal clinic. The inclusion criteria were confirmed pregnant, presenting to the antenatal clinic for booking and having signed informed consent. Clients who refused to give consent were excluded from the study.

Data collection

The target population were the women presenting for the first time for antenatal care. The women were approached to join the study after the study had been explained to them. Those who agreed to participate were recruited after informed consent had been obtained. An anonymous semi-structured questionnaire was developed for the study. The questionnaires were pre-tested and validated among pregnant women in the hospital before use. Clinic staff were also debriefed on the correct mode of administering the questionnaire before commencement of the study.

The questionnaires were essentially self-administered, after full explanation of the relevant sections by clinic staff. However, for non-literate women, the questions were explained by clinic staff in the local language and were also assisted in completing the questionnaire.

The study sample size of 360 was derived based on the formula: $N= z^2pq/e^2$, where N=minimum required sample size, Z=standard variate (1.96), P=estimated prevalence (0.28) (obtained at the current CS rate of 27.96%)[7] in Central Hospital Agbor, Q=(1-p), e^2 =acceptable error at 0.05 ($N= (1.96)^2$ (0.28) (0.860)/ $(0.05)^2$=320.90). The minimum sample size was further increased by 10% attrition value (32.1). The total sample size was 321+ 32.1=353.1. The sample size was increased to 360 surveyed women who met the inclusion criteria and consented to participate within the study period to further increase the power and improve the external validity of the study.

The socio-demographic characteristics, mode and outcome of last delivery, acceptance of CS as an option of delivery, fears of antenatal patients about CS and for patients who declined CS, their reasons for declining CS were sought.

Ethical consideration

Ethical approval for the study was obtained from the Research and Ethics Committee of Central Hospital, Agbor, on October 12, 2022, with protocol no: E. Comm/C/0/AMZ/160/22. The study was executed in accordance with the guidelines of the Declaration of Helsinki, 2013

Data Analysis

A database was generated from the completed questionnaires. Analysis of data was done using SPSS version 20 (SPSS Inc., Chicago IL) and conclusions were drawn by means of descriptive statistics.

Results

The mean age of participants was 30.34 with a standard deviation of 6.27**.** Majority of the participants were in the age group 26-30 and 31-35 constituting 36.4% and 23.6% respectively. The study population were predominantly well educated with tertiary and secondary level of education accounting for 53.6 and 34.2 % respectively. Only 1.9% of the study population had no formal education. Multiparous women accounted for 60.8% of the study population.

Table I: Socio-demographic characteristics of participants

AGE	**N (360)**	**(%)**
≤20	10	2.8%
21-25	64	17.8
26-30	131	36.4%
31-35	85	23.6%
>35	70	19.4
EDUCATION		
No Formal Education	7	1.9
Primary	37	10.3
Secondary	123	34.2
Tertiary	193	53.6
PARTY		
0	123	34.2
1-4	219	60.8
≥5	18	5.0
RELIGION		
Non	1	0.3
Catholic	56	15.6
Protestants	36	9.2
Pentecostal	262	72.8
Islam	9	2.5

Grand multipara only accounted for 5.0% of the study population. The participants were predominantly

Christians with the Pentecostal group accounting for 72.8% of the study population.

Table II: Why Is caesarean Section Performed?

Benefit for Baby	10	3.3%
Benefit for Mother	19	5.8%
Benefit for Mother and Baby	316	87.8%
Convenience for Dr	8	2.2%
No idea	4	1.1%
No comment	3	0.8%

Table III: Views about CS in their current Pregnancy

Will accept by choice to avoid the complications of labour	6	1.7%
Will only accept CS if their life or that of baby is in great danger	322	89.4%
Will reluctantly accept CS if the Doctor say so	25	6.9%
Will not accept CS under any Circumstance	7	1.9%

Table IV: Fears of ANC patients regarding CS

Fear of Death	63	17.5%
Doctor incompetence	109	30.3%
Fear of subsequent infertility	15	4.2%
Fear of post operative pain	146	40.6%
Failure of womanhood	18	5.0%
Religious reasons	7	1.9%

On the question of why CS is performed, 316 (87.8%) agreed that it was for the benefit of both mother and the unborn child (Table II). Among the participants, 4 (1.1%) did not have any idea why CS was performed, while 8 (2.2%) persons claimed it was done for the convenience of the doctor.

Majority of the participants, 322 (89.4%) would accept CS if there was threat to their life or that of the baby. Only 6 (1.7%) said they would choose CS as an option of delivery to avoid the complication of labour while 7 (1.9%) said they would not accept CS under any circumstance.

Post-operative pain 146 (40.6%) and Doctor's incompetence 109 (30.3%) were the major fears antenatal patients had towards CS.

Discussion

From the study, 322 (89.4%) would accept CS if their life or that of the baby is in danger while 6 (1.7%) would accept CS by choice to avoid complications of labour. The two groups made up 91.1% of the study population. Only 7 (1.9%) of the participants say they would not accept CS even when indicated. The acceptance rate of CS in this study was higher when compared with previous report by Adeoye et al[11] where 225 (81.2%) of the study population say they would only accept CS if their life or that of the baby is in danger and 4 (1.4%) accepted CS by choice to avoid the complications of labour. Orji et al[18] in the Southwest reported that 190 (47.5%) of the study population were opposed to CS while Ezeome et al[19] in the Southeast reported that 24 (12%) would not accept CS no matter the outcome. In the study by Aziken et al[16] in Benin city, 50 (12.1%) would reject CS even when indicated. The reasons given by the participants for rejecting CS were fear of death, pain associated with CS, reproductive failure, culture/customs and cost. Benin is a traditional community with a strong cultural and religious background. Religion was the third most important factor that contributed to the rejection rate in their study. The increase acceptance of CS as option of delivery in our study could be a reflection of the improvement in the technique of the procedure[20] and elimination of cost. An earlier study by Barnabas et al[21] has documented that fear of CS remain one of the reasons why women are averse to formal antenatal care and as such, present late for CS when indicated. Delay in seeking appropriate care in pregnancy continue to play a major role in the high perinatal and maternal mortality associated with most third world countries. Continuous education through antenatal classes and public awareness will go a long way in allaying the fears of pregnant women towards CS.

A subgroup analysis of educational status of the participants versus their views about CS in the index pregnancy showed that the higher the education, the less likelihood that pregnant women will reject CS as an option of delivery. Among the group with no formal education, 28.70% of them rejected CS under any circumstance while the total rejection among those with tertiary level of education was 0.52%. Other previous studies have documented the positive impact of education on the acceptance of CS as an option of delivery among antenatal attendees. [21,22,23] There is the need to continue the emphasis for better education especially for the girl child as it has been proven to impact on the goals related to female reproductive health generally.

Out of the 1.9% (7) that totally rejected CS under any circumstance, 1.3% (5) were Moslems. The study was conducted in a population that was predominantly a Christian community. It is plausible that a completely different result would be obtained if this study was conducted in a population dominated by the Moslem faithful.

In the previous study by Aziken et al[16] 19.8% of participants stated that the cost of CS was a contributory factor on why they were averse to CS

delivery while Lawani et al[24] reported 20.8% rejection rate due to cost of the procedure. Ezechi et al[13] reported rejection rate of 66.5% for financial reasons. Simon et al in Kogi state reported 45% CS rejection due to financial reasons[22]. Cost was a significant reason for rejecting surgery in these studies highlighted. In our own setting, Antenatal care and delivery (including Vaginal delivery and CS) are free. It was therefore not surprising to note that 91.1% of the participants would accept CS when indicated. Whereas one can imagine that financial constraints played a huge part in the decision to refuse intervention in the previous studies[1316,24,] the reason for 1.7% of participants rejecting the procedure and 6.9% accepting it reluctantly merits further examination. The death of one-woman during childbirth is a significant loss to the community. It is therefore important for obstetricians, midwives, and allied health practitioners to continue to scale up coordinated package of maternity health education and counseling through the antenatal care clinic, emphasizing the place of every woman's desire for best maternal and perinatal outcome, as well as empathy towards the experience of women during pregnancy and childbirth. Utilization of the antenatal care have been shown to have a positive impact on the utilization of Caesarean delivery and therefore, a reduction in morbidity and mortality associated with a contraindicated vaginal delivery[9].

The major reasons given by participants for refusing CS included post-operative pain, perceived Doctors incompetence and the fear of death. Post-operative pain continues to be a major reason for aversion to CS as documented in other previous studies.[10,12,14,15,17] There is the need for a review of post-operative pain management with the use of potent analgesia. Patient education and the availability and use of potent opioids will help reduce post-operative pain after CS. The use of rectal diclofenac has been shown to provide effective analgesia and reduces the need for opiods.[25] Awareness, availability and increase training in the use of epidural anaesthesia will help to reduce post-operative pain following CS and increase acceptance of the procedure. The perceived fear of Doctor's incompetence and the fear of death are real concerns considering the high rate of maternal mortality and complications [14] of CS like ureteric injury, bowel injury and Hysterectomy resulting in subsequent infertility. "Failure of womanhood" and religious believe has continued to play their roles as reasons why pregnant women reject CS when offered the procedure[16]. The mythology that pregnant woman should deliver like the "Hebrew woman" remain as folklore that is deep rooted in the mind of many antenatal women, hence their desire to have vaginal delivery to avoid the perceived reproductive failure[16] . The perceived attitude of the community towards women with previous CS and their stigmatization has remained a major setback in the acceptance of CS[26]. Health care providers should engage the communities in the form of advocacy, public enlightenment, and shared responsibility for the overall health of their people directed toward a determined effort to discard myths and strengthen correct information about the place of CS as an intervention. The impact will be a positive attitude toward CS by the stakeholders in the communities to remove the stigma associated with delivery by CS, which has the potential of improving the uptake of CS.

Majority of the participants (89.4%) said they would only accept C/S if their life or that of their unborn baby was in great danger, similarly, many agreed that the reason why Doctors do CS was for the benefit of the mother and baby. This also re-emphasize the observation noted before that the need for their safety and that of the unborn infant remain a major determinant of the acceptance of CS in our community.

Aversion to CS was low in this study. However, some of the participants expressed their fears and uncertainty about the procedure. Many of their worries are genuine, but can be properly addressed through many channels, the healthcare - client participation, and community involvement.

Conclusion

A significant proportion of antenatal attendees (89.4%) will accept CS to avoid the complication of labour and delivery while 6.9% will reluctantly accept the procedure and 1.7% out rightly rejected the procedure. Rejecting a procedure like CS when it is indicated could be catastrophic. Their highest fear were post-operative pain and incompetence of the doctors.

There is the need to continuously educate antenatal attendees on the safety of the procedure. Health education and antenatal counselling is suggested to help reduce the rejection of CS by our antenatal women and increase the uptake.

Strengths and limitations

The elimination of cost as a major barrier previously documented in other studies made this study unique in

its ability to examine the complexity of provider–patient engagements regarding offering and accepting CS for delivery. The study was limited by the fact that it was carried out in a community that was predominantly Christians. The impact of culture and religion may be different when conducted in a mixed society, therefore, the need for further studies in communities with fair representation of the various religious groups is recommended.

Acknowledgments

The authors would like to appreciate the medical officers who assisted with data collection and the patients–volunteers who participated in the study.

Source(s) of support: Nil
Presentation at a meeting: None
Conflicting Interest: Nil

References

1. Murphy JD, Operative deliveries. In: Myers JE, Lenny LC (eds) Obstetrics by Ten teachers, *20th edition, CRC press;* 2017; 458-496
2. Isah AD, Adewole N, Zaman J. A five year survey of caesarean delivery at a Nigeria tertiary hospital. *Trop J ObstetGynaecol* 201; **35**:14-17
3. Bhartia A, Sen Gupta Dhar R, Bhartia S. Reducing Caesarean section rate in an urban hospital serving women attending privately in India-a quality improvement initiative. *BMC pregnancy and childbirth* 2020;20: 556
4. Ye J, Betrán AP, Guerrero Vela M, Souza JP, Zhang J. Searching for the optimal rate of medically necessary cesarean delivery. *Birth*. 2014; **41**:237–44
5. Martin JA, Hamilton BE, Osterman MJK, Driscoll AK. National Vital statistics reports. *Birth* 2021;**70 (2)** :1-51
6. Kwawukume EY. Caesarean section. In: Kwawukume EY, Emuveyan EE, editors. Comprehensive obstetrics in the tropics. *1st ed. Asante and Hittscher printing press*; 2002. **pp** 321-9.
7. Maduka RN, Enaruna NO. Acceptance of repeat Caesarean section among and its determinants among a Nigerian pregnant women population. Sahel Med J 2021; 24:104-10.
8. Ojiyi E, Anolue F, Dike E, Chukwulebe A. Appraisal of Caesarean Section at the Imo State University Teaching Hospital, Orlu, South-eastern Nigeria. *Intern J of Gynecol Obst*. 2012;**16**(2).
9. Finger C. Caesarean section rates skyrocket in Brazil. Many women are opting for caesareans in the belief that it is a practical solution. Lancet. 2003;362(9384):628.
10. Ezechi OC, Nwokoro CA, Kalu BKE, Njokanma FO, Okeke GCE. Caesarean morbidity and mortality in a private hospital in Lagos, Nigeria. *Trop J Obstet Gynaecol*. 2002;**19(2):**97-100.
11. Sunday-Adeoye I, Kalu CA. Pregnant Nigerian women's view of cesarean section. *Niger J ClinPract*. 2011;**14(3):**276- 279.
12. Ezechi OC, Edet A, Akinlade H, Gab-Okafor CV, Herbertson E. Incidence and risk factors for caesarean wound infection in Lagos Nigeria. *BMC Res Notes*. 2009; **2:186**.
13. Ezechi CO, Fasubaa OB, Kalu BEK, Nwokoro CA, Obiesie LO. Caesarean delivery: why the aversion? *Trop J Obstet Gynaecol*. 2004;**21(2)**:164-167.
14. Chigbu C, Iloabachie G. The burden of caesarean section refusal in a developing country setting. BJOG 2007; 114:1261–1265
15. Enabudoso EJ, Ezeanochie MC, Olagbuji BN. Perception and attitude of women with previous caesarean section towards repeat caesarean delivery. J Matern Fetal Neonatl Med 2011; **24**:1212-4
16. Aziken M, Omo-Aghoja L, Okonofua F. Perceptions and attitudes of pregnant women towards caesarean section in urban Nigeria. Acta Obstet Gynecol Scand. 2007;**86(1)**:42- 47.
17. World Bank Report 2019. Accessed http//www.databank.worldbank.org/data/download/poverty/33EFOSBB…/Archives 5th January, 2020.
18. Orji EO, Ogunniyi SO, Onwudiegwu U. Beliefs and perceptions of pregnant women at Ilesha about Caesarean section. Trop J obstet Gynecol 2003; 20:141-3.
19. Ezeome IV, Ezugworie JO, Udealor PC. Beliefs, perceptions, and views of pregnant women about cesarean section and reproductive decision-making in a specialist health facility in Enugu, Southeast Nigeria. Niger J Clin Pract 2018; 21:423-8
20. Suwanrath, C., Chunuan, S., Matemanosak, P, Pinjaroen s. Why do pregnant women prefer cesarean birth? A qualitative study in a tertiary care center in Southern Thailand. *BMC Pregnancy Childbirth* **21,** 23 (2021).
21. Naa Gandau, B.B., Nuertey, B.D., Seneadza, N.A.H. Akaateba D, Azusong E, Yirifere J.D et a*l.* Maternal perceptions about caesarean section deliveries and their role in reducing perinatal and neonatal mortality in the Upper West Region of Ghana; a cross-sectional study. *BMC Pregnancy Childbirth* 2019; (**19):** 350.
22. Akogu Simon P.O, Idachaba Timothy and Alapo Funmilola. Cesearean Section Rate and Acceptance of Cesarean Section among Antenatal Clinic Attendees at the Kogi State University Teaching Hospital, Anyigba, North Central Nigeria. Asian Research J of Gynaecol Obstet 2021;5(4): 27-33
23. Gilbert A, Benjamin A, Abenhaim HA. Does education level influence the decision to undergo elective repeat caesarean section among women with a previous caesarean section? J Obstet Gynaecol Can. 2010 Oct;32(10):942-7.
24. Lawani LO*, Igboke FN, Ukaegbe CI, Anozie OB, Iyoke CA, Onu FA, Agbata TA, Asiegbu O. Perception and Socio-cultural Barriers to the Acceptance of Caesarean Delivery in A Tertiary Hospital in Abakaliki, South East Nigeria. Int J women and Rep sci. 2019; 7(2):163-168

25. Rashid M, Jaruidi H.M. The use of rectal diclofenac for post-CS analgesia. Saudi Med J 2000; 21(2):1459.
26. Egbodo OC, Akunaeziri UA, Edugbe AE et al. Awareness, Attitudes and Perception of Antenatal Patients to Caesarean Section: The Jos, Nigeria Experience. Int J Adv Res Gynaecol Obstet 2018; 1(1): 11-18.
27. Gedefaw G, Waltengus F, Demis A. Does Timing of Antenatal Care Initiation and the Contents of Care Have Effect on Caesarean Delivery in Ethiopia? Findings from Demographic and Health Survey. J Environ Public Health. 2021 Aug 9;2021:7756185. doi: 10.1155/2021/7756185. PMID: 34422065; PMCID: PMC8371644.
28. Kathryn A. Diamond, Elizabeth A. Bonney, Jenny E. Myers,
29. Caesarean section: techniques and complications, Obstetrics, Gynaecology & Reproductive Medicine, Volume 24, Issue 2, 2014,