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RESEARCH ARTICLE

Maternal factors for requesting planned caesarean section in western Rajasthan

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ABSTRACT

Background: Pregnant women who request a caesarean section in the absence of obstetric indication are increasing in number. **Objectives:** The objective of this study is to analyse the responsible factor for maternal requests for a planned or elective caesarean section in western Rajasthan. **Methods:** A descriptive cross-sectional qualitative study was conducted with semi-structured proforma, in-depth interviews with women delivered by caesarean section. A total number of 100 patients who underwent caesarean section were taken, and 100 patients of vaginal delivery were included in the study for demographic comparison. Data were analysed with statistical software. **Results:** In our study, out of 100 patients who underwent caesarean delivery, 38% patients had a history of previous caesarean section, 18 % choose caesarean section due to past traumatic or negative experiences, 14 % due to safety issues of the child, 13 % choose caesarean section due to fear and pain of labour, 9 % due to religious belief, 5% due to family advice and peer pressor and 3% wanted a simultaneous tubectomy. **Conclusion:** Previous caesarean section with the refusal of vaginal birth after a caesarean section was the most common cause of elective caesarean section. There are various rationales and life experiences behind a maternal request for a caesarean section needing carefully targeted attention and health care. A previous traumatic birth experience and pain also prompted a caesarean to avoid a repetition of the trauma.

Keywords: Caesarean delivery, vaginal delivery, maternal request, C section.

Childbirth is a precious moment for any woman. 'Caesarean', the lifesaving surgery in complicated deliveries, is now turned out to be a quite common surgery. Caesarean section is recommended when the vaginal delivery creates a risk to either mother or the baby. The obstetric risks are justified under certain circumstances such as the contracted pelvis, dystocia due to soft parts, cephalo-pelvic disproportion, inadequate uterine forces, antepartum haemorrhage, foetal distress and prolapse of the cord, maternal diseases such as bad obstetric history, cardiac disorder and elderly primigravida.[1]

WHO recommended an average of no more than 10-15% of caesarean births for optimal maternal and neonatal outcomes.[2] It is also suggested that no additional benefit accrues to the children or the mothers when the rates exceed this level. However, the rate of caesarean section increasing worldwide steadily beyond the optimum level as recommended by WHO.[3] The caesarean section rate has increased from 12% in 2000 to about 21% in 2015 and has reached an epidemic in many countries.[4, 5] Rising caesarean section rates in high and middle-income countries over recent decades have initiated concern about the overuse of caesarean section.[6, 7] The mother and child are exposed to short-term, and long-term health risk due to the high caesarean rate and that cause a financial burden on families and health systems.[8]

In line with global trends, India's caesarean section rate has increased from 27.7 to 40.9%. In some states, the caesarean section rate in private facilities is above 70%.[9, 10]

The caesarean section also increased in government

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institutes because drugs, blood and treatment facilities are available free of cost under JSSK program.[11, 12] One reason for the increasing caesarean delivery rate is a maternal request for caesarean delivery. The American College of obstetricians and gynaecologists define a caesarean section on maternal request (CSMR) as an elective section in the absence of standard medical/obstetrical indication to avoid vaginal birth.[13]

The reasons for increasing caesarean section are multifactorial and not well-understood.[14] Many factors like professional practice styles, maternal characteristics, rising unethical practices, corporate hospital pressure, and social and cultural factors are also important in this trend.[15, 16] Nevertheless, maternal request for caesarean delivery remains a controversial issue in academic and public debate. The elective caesarean section has several benefits, including reducing abdominal pain during birth and injury to pelvic floor muscles and maintaining the integrity of perineum and bladder function.[17, 18] There is also a decrease in vaginal delivery-related injury to baby and birth asphyxia during caesarean section.[19] This study analysed the responsible factor for maternal requests for a planned or elective caesarean section in western Rajasthan.

Material and methods

This study was a hospital-based observational cross-sectional study conducted in the department of obstetrics and gynaecology, Government Medical College, and the attached hospital, Barmer, Rajasthan, India. This study was carried out on 100 females with caesarean section and 100 females who had gone for normal vaginal delivery. We included pregnant women coming to the obstetrics and gynaecology department for delivery from July 2020 to October 2020. We included primigravida and multigravida with a singleton pregnancy. Any woman with an absolute indication for caesarean section was excluded from the study, such as placenta previa, contracted pelvis, multiple pregnancies, and those with more than one caesarean section, women with any medical disorder such as diabetes, hypertension etc. were excluded from the study.

The women were recruited using purposeful sampling and a maximum variation strategy. All the participants were selected with different characteristics from different groups. Women were ensured of the confidentiality of the data and were able to withdraw from the study at any point.

We interviewed women by using a structured questionnaire-based literature review. It includes demographic variables, including age, education, socioeconomic status, occupation, and clinical characteristics like parity and gestational age. We also applied a structured questionnaire proforma for factors affecting delivery mode based on the literature review. Women were questioned about delivery choice, whether an elective caesarean section or vaginal birth and the reason for their favourite.

Prior permission from the research review board and ethical committee of the institution was taken. All the ethical aspects of the study were taken care of. All patients were managed according to the department protocol. Participants who gave written consent and willing to participate in the study were included in this study.

Statistical analysis: The qualitative data were presented as frequency distributions and mean ± standard deviation of the mean for continuous variables. The significance level was 0.05. The Pearson chi-square test was used for qualitative variables between groups. The student's t-test was performed to examine the significance level of continuous variables. Statistical software IBM SPSS (V 15) was used for analysing the data.

Results and observation

A total of 100 women in each group were considered in this study for data analysis (table 1). The mean age of women who delivered by caesarean section was 28.7 years (SD 5.8). Most women were between 21 to 30 years of age (36 %), followed by the 31 to 40 age group (27 %). The mean age of women who delivered vaginally was 24.3 years (SD 6.4). Most women were in the age group of 21 to 30 years (54 %), followed by the 31 to 40 years of age group (24 %). There was a significant statistical difference in the age group in both groups (p-value 0.038).

In the caesarean section group, most women were educated up to secondary school (36 %), followed by graduates (32 %). While most of the women who delivered vaginally educated up to secondary school (41 %) followed up to primary school (25 %). However, there was a statistically insignificant difference in both groups' education levels (p-value 0.392).

Depending upon occupation, our data showed that maximum women were working (77 %) who requested for caesarean section. In contrast, those women who asked for vaginal delivery were housewives (55 %), and there was a statistically significant (p-value of 0.00) in both groups.

On the socioeconomic status, most women who were delivered by caesarean section had middle socioeconomic status (51 %) followed by higher socioeconomic status (26 %). Simultaneously, those delivered vaginally belonged to the middle class (57 %), followed by poor socioeconomic

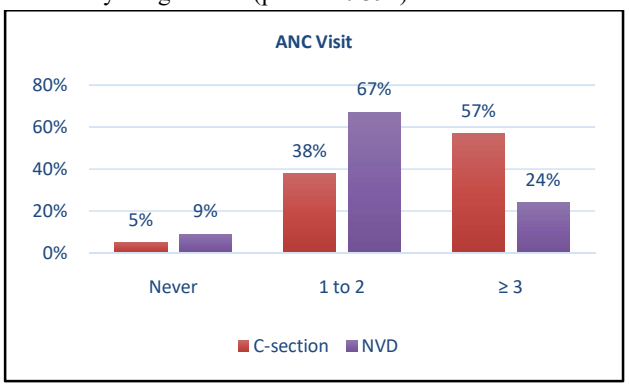
status (32 %). The difference was statistically significant (p-value, 0.019).

Table 1: Women's sociodemographic and clinical characteristics

Variables	CS No.	CS %	NVD No.	NVD %	Chi-square P-value
Age					
Less than 20	18	18	8	8	
21 to 30	36	36	54	54	
31 to 40	27	27	24	24	8.38
More than 40	19	19	14	14	0.038
Level of education					
Illiterate	8	8	12	12	
Primary	24	24	25	25	
Secondary	36	36	41	41	2.997
Graduation	32	32	22	22	0.392
Occupation					
Housewife	23	23	55	55	21.52
Working	77	77	45	45	0.00
Socioeconomic status					
Poor	23	23	32	32	
Middle Class	51	51	57	57	7.887
Higher Class	26	26	11	11	0.0193
Residence					
Rural	60	60	54	54	0.734
Urban	40	40	46	46	0.391
Parity					
First	32	32	11	11	
Second	40	40	41	41	15.531
Third or More	28	28	48	48	0.00
Period of gestation					
<37 weeks	14	14	10	10	
38 to 39 weeks	65	65	72	72	1.255
>40 weeks	21	21	18	18	0.533

CS – Caesarean section, NVD – Normal vaginal delivery, No - Number

Based on the background, most of the women in both groups belong to rural areas (60 % and 54 %) and are statistically insignificant (p-value 0.391).



NVD – Normal Vaginal Delivery, ANC- Antenatal clinic

Figure 1: Frequency of antenatal clinic visits during pregnancy

As per parity was concerned, women with second gravida preferred caesarean section (40 %), while multigravida women preferred vaginal delivery (48%). It was found statistically significant (p-value- 0.00). Most women in both groups were 38 to 39 weeks of gestational age group (65 % and 72 %) during the delivery time. It was statistically not significant (p-value 0.533).

Figure 1 showed the frequency of antenatal visits during pregnancy. Most women who delivered vaginally visit one to two times during their pregnancy (67 %), while only 24 % visit more than three times for antenatal clinic check-ups. In comparison, women delivered by caesarean section had more regular antenatal visits three or more than three times (57 %). Only 38 % of women had a history of one to two times. Some women never visited for an antenatal check-up, 5% in the caesarean section group and 9 % in the normal vaginal delivery group. They came hospital first time only for delivery.

Table 2: Factors affecting maternal request for a planned caesarean section

Variables	No (100)	%
1. Previous caesarian section	38	38
a. Emergency caesarean section	23	23
b. Elective caesarean section	15	15
2. Traumatic/Negative birth experience	18	18
3. Safety issue of child	14	14
4. Fear and pain of labour	13	13
5. Religious belief	9	9
6. Family advice & peer pressure	5	5
7. Wanted simultaneous tubectomy	3	3

Table 2 showed the factor affecting the maternal request for a planned caesarean section. The most common reason for choosing the caesarean section was the history of past caesarean sections (38%). Past traumatic and negative birth experiences (18%) were the second most common cause of planned caesarean section. 14 % of women chooses caesarean section due to the safety issue of a child. According to them, the caesarean section was the safest method for safe baby birth. Fear and labour pain (13 %) was another important factor in the maternal request for caesarean section in our study. 9 % of women chooses caesarean section due to religious region. According to them, a particular date or day was auspicious for childbirth. In comparison, only 5 % choose caesarean section due to family advice or peer pressure. Only 3 % wanted simultaneous tubectomy, so they requested for caesarean section.

Discussion

In this study, the perception of women about the planned caesarean section was studied. This study indicates that age, socioeconomic status, occupation, and parity significantly correlate with women's birth preference. Women with advanced age preferred caesarean delivery because they believed that the baby's risk is increased at an older age. The previous study supports our data.[20, 21] Women with a higher

level of education preferred caesarean section. This finding also correlates with other reports that more educated women are likely to choose caesarean delivery as a mode of delivery.[22, 23] One study was conducted among nulliparous women in Hong Kong. China showed significantly more women who preferred the caesarean section at 20 weeks of gestation changed to vaginal delivery at 37 weeks of pregnancy than vice versa.[24] According to this conflict, more investigations are needed to do about the relationship between gestational age and caesarean delivery preference. Qualitative research from Sweden showed that primiparous women requesting caesarean section often expressed deeply rooted emotions about normal vaginal birth since early adulthood.[25]

In our study, most working women considered the caesarean section as a preferred mode of delivery. Working women preferred caesarean sections due to lack of time and wanted to avoid frequent consultations with the doctor. So, they choose caesarean delivery so that they delivered the baby according to their suitable time. A similar finding from other studies also supports our research.[26, 27] We observed that a higher percentage of women who belonged to the high and middle classes chose the caesarean section as a delivery mode. They consider it safer for their child, like other studies.[28, 29]

In contrast, poor and middle-class people choose vaginal delivery due to a lack of knowledge or not afford the operative process's cost. It was found that a high percentage of women of high socioeconomic status preferred caesarean delivery on maternal request - these findings are supported by similar literature.[20, 30, 31] Women who prefer the caesarean section more often have higher age, unemployed, low education level, non-native origin, symptoms of depression, smoking, and history of sexual abuse.[32, 33]

Parity may be an essential factor for understanding maternal requests, but some studies have shown different results for multiparous women.[25] Previous caesarean or fear of birth cause seems to be a higher prevalence of caesarean section among multiparas than primipara.[29, 34]More study is required on how and why the fear of giving birth increases with parity in some women is important for developing future care.

Women with previous caesarean section choose to repeat caesarean section because of concern about the risk of vaginal birth.[35] Previous negative birth experiences and poor outcomes in last pregnancy like stillbirth are the significant factors for the caesarean sections preference. These findings are similar to other studies.[28, 36, 37]

Caesarean preference is strongly associated with fear of birth, previous caesarean delivery and previous negative birth experience compared to women with a preference for vaginal delivery.[25, 38] First-time women requesting planned caesarean delivery do not always present with a clinically significant fear of childbirth. Still, they have more negative expectations of vaginal delivery than women requested for normal vaginal delivery.[39, 40]

We suggest that further studies are required to examine factors influencing women's childbirth preferences in more detail and prospectively (especially women in their first pregnancy).

Limitations: This study was a cross-sectional study which limits considerations regarding causality because, in a cross-sectional study, the choice was only assessed at a point in time.

Conclusion

Various factors influenced women to choose caesarean delivery. In this study, age, socioeconomic status, educational level, occupation, history of previous caesarean section, negative birth experience and fear of delivery were important factors. According to the caesarean delivery preference rate, this study suggests the need to counsel women to choose between vaginal delivery and caesarean delivery in the first pregnancy.

Maternal request for caesarean requests is based on varying rationales and life experiences. Previous negative birth experience occurs as a significant driver of a subsequent mode of delivery. Thus, a caesarean section on maternal request should be regarded partly as an iatrogenic problem with the potential for improvement and prevention during and after childbirth. High risk of the emergency caesarean section is a perceived risk in some women based on their requests, which may call for a different counselling approach. Overall, prevention and healthcare should be carefully targeted according to such findings.

Conflict of interest: None. **Disclaimer:** Nil.

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