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Research Article

TO FIND OUT THE INCIDENCE OF CAESAREAN DELIVERY ON MATERNAL REQUEST (CDMR)

Sarwat Khalid[1], Asma Iqbal[2], Sabaha Ahmed[3], Hooria Aqeel[4], Tooba[5], Syeda Fariha Hussain[6].

1. Assistant Professor of Gynaecology and Obs, Karachi Metropolitan University Abbasi Shaheed Hospital Karachi Pakistan. email: sarwatsethi500@gmail.com (Corresponding author)
2. Assistant Professor of Gynaecology and Obs, Karachi Metropolitan University Sobhraj Maternity Hospital Karachi Pakistan. Email: salmanasma150@gmail.com
3. Post Graduate Trainee Gynaecology and Obs, Karachi Metropolitan University Abbasi Shaheed Hospital Karachi Pakistan. email: sabaha18@gmail.com
4. House officer Gynaecology and Obs, Karachi Metropolitan University Karachi Pakistan. email: hooriaaqeel23@gmail.com
5. Post Graduate Trainee Gynaecology and Obs, Karachi Metropolitan University Abbasi Shaheed Hospital Karachi Pakistan. Email: adrtooba@gmail.com
6. Assistant Professor Gynaecology and Obs, Jinnah Medical and Dental College Karachi Pakistan. Email: fariha.hussain@jmc.edu.pk

ABSTRACT

Background: There has been a notable increase in the global prevalence of Caesarean deliveries over the last few decades, where Caesarean delivery on maternal request (CDMR) stands out as one of the major reasons for this increasing trend. There has also been an increase in the number of elective Caesarean deliveries in Pakistan and other nations, which raises various clinical, ethical, and public health issues related to performing unnecessary Caesarean deliveries.

Objective: To find out the incidence of Caesarean delivery on maternal request (CDMR)

Study design: A cross-sectional study

Duration and place of study: This study was conducted at Karachi Metropolitan University Abbasi Shaheed Hospital Karachi Pakistan from February 2025 to February 2026

Methodology: This was a study of 160 women within the age range of 18-40 years having single pregnancies of ≥38 weeks with a viable fetus requesting elective Caesarean delivery. Informed consent was obtained, and data was analyzed through SPSS version 20. Demographic and obstetric parameters were described using descriptive statistics, while association between maternal request and other parameters was analyzed using Chi-square test, with $p<0.05$ being significant.

Results: A total of 160 females with their ages ranging from 18 years to 40 years were a part of this study. The mean age of the

participants was 29.48 ± 2.31 years while the mean gestational age was 39.01 ± 0.92 weeks. Our results showed that the most influential people who were involved in decision-making were spouses, representing 63.1%. Only 20 women explicitly requested for c-section which amounts to only 12.5% of our total sample size. Age, gestational age, and parity were not significantly associated with maternal request. However, there was a significant association seen between influential people and maternal requests (p-value = 0.001).

Conclusion: Maternal requests accounted for 12.5% of all Caesarean deliveries.

Keywords: Caesarean delivery, maternal request, gestational age

INTRODUCTION

Cesarean section deliveries can be classified under three main categories including deliveries conducted as per the set clinical guidelines, those deliveries that are clinically indicated and the third category being those delivered through cesarean section by the sole request of the mother despite there being no indications of any risk to delivering vaginally [1]. This particular category of cesareans, referred to as cesarean delivery on maternal request (CDMR), has received much interest owing to the increase in their prevalence in recent years and their contribution to obstetrics practice [2].

Cesarean delivery on maternal request is a complex phenomenon influenced by multiple psychological, social, cultural, and health care–related factors. One of the most commonly reported reasons is fear of labor pain (tokophobia), which may arise from previous traumatic birth experiences, anxiety disorders, or negative stories shared by family members and friends. Many women perceive cesarean delivery as a less painful and more predictable option compared with prolonged labor and vaginal birth. Concerns regarding emergency cesarean section after a failed trial of labor, fetal distress, or unexpected obstetric complications also influence maternal preference for planned cesarean delivery.

In addition, previous unfavorable obstetric experiences, including prolonged labor, instrumental vaginal delivery, severe perineal tears, postpartum hemorrhage, stillbirth, or neonatal complications, may lead women to request cesarean delivery in subsequent pregnancies. Women with a previous cesarean section may also prefer repeat cesarean delivery because of concerns regarding uterine rupture, unsuccessful vaginal birth after cesarean (VBAC), or advice received during previous pregnancies. Psychological reassurance, perceived safety for the baby, and the desire to minimize uncertainty surrounding childbirth further contribute to maternal preference for cesarean birth.

Social and cultural influences also play a significant role in the increasing demand for CDMR. Higher educational status, increased access to health-related information through the internet and social media, family influence, physician counseling, medico-legal concerns, and socioeconomic status may all affect decision-making regarding the mode of delivery. Some women request cesarean delivery for personal convenience, the ability to schedule the date and time of birth, the presence of family support during the planned delivery, or to avoid perceived adverse effects of vaginal birth such as urinary incontinence, pelvic floor dysfunction, and sexual dysfunction. These factors collectively highlight that maternal request for cesarean delivery is often multifactorial and requires comprehensive antenatal counseling to facilitate informed decision-making.

In recent decades, there has been an increase in the rate of cesarean delivery, increasing up to as high as 50% [3]. Among the various causes of cesarean sections, CDMR has been shown to contribute greatly to the rising number of cesareans, especially in the developed world [4].

A similar increase in the cesarean rate has also occurred in Pakistan over the past decade [5]. Research work carried out by authors such as Gulfareen et al., has pointed towards increased instances of elective cesarean sections where 40.7% of cesarean deliveries were elective [6]. Similar trends have also been noticed in international literature; for instance, a study found the prevalence of CDMR to be 24.7% [7]. Similar research from other countries including Brazil, the US, India, Sweden and Denmark have shown different but increasing trends of CDMR [8].

The increasing rate of cesarean deliveries, especially those without medical necessity, pose serious challenges for both health care providers as well as the policy makers [9,10]. The ethical issues involved have also been emphasized by institutions like the International Federation of Gynecology and Obstetrics (FIGO), who are concerned about the justification of performing a cesarean section without clear evidence of overall benefit. Thus, the current research was carried out to find out the incidence of cesarean delivery on maternal request (CDMR).

METHODOLOGY

This cross-sectional study was conducted on women who were aged between 18 years to 40 years. All the women who were involved in this study had a singleton gestation which was verified by ultrasound. The inclusion criteria also included a gestational age of 38 weeks or more along with the existence of a live fetus before delivery. There were a total of 160 females enrolled in this study using consecutive non-probability sampling. This research was approved by the Ethical Review Committee of the institute.

Exclusion Criteria: Patients who were scheduled for c-section delivery for either obstetric or medical reasons were not a part of this study.

Eligible women who requested for elective Caesarean deliveries were enrolled for the study. Participants and their families were adequately briefed about the purpose, benefits, and confidentiality of the study. Informed consents was obtained for all willing participants while data collection was done in accordance with the predetermined method to ensure consistency. Adherence to the study exclusion criteria was strictly followed to avoid possible biases.

Data were analyzed using SPSS version 20. Frequency and percentage of categorical variables like maternal request and other variables of interest were provided while mean and standard deviation of continuous variables like age, gestational age, and parity were provided. The maternal requests were grouped into various categories based on parity, maternal age, gestational age, and other related variables. Associations within post-stratifications were determined by applying Chi-square test with p-value <0.05 being statistically significant.

RESULTS

A total of 160 females were involved in this study. The age of the females in this study ranged from 18 years to 40 years. The mean age of the participants was 29.48 ± 2.31 years. Table number 1 shows the demographic characteristics of our study

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Table No. 1:

Demographics	Mean ± SD
Age (yrs)	29.48 ± 2.31
Parity	1.57 ± 1.22
Gestational Age (weeks)	39.01 ± 0.92

Table number 2 shows the distribution of influential people involved in decision-making along with maternal requests for c-section delivery.

Table No. 2:

Variables	N	%
Influential People		
• **Spouse**	101	63.1
• **Self**	48	30.0
• **Elder Members**	11	6.9
Maternal Request		

• **Yes**	20	12.5
• **No**	140	87.5

Table number 3 shows the association of different variables with maternal request for c-section.

Table No. 3:

Variables	**Maternal Request**				**p-value**
	Yes		**No**		
	N	**%**	**N**	**%**	
Age (yrs)					0.802
• **18 to 30**	12	11.6	92	88.4	
• **30 to 40**	8	14.3	48	85.7	
Gestational Age (weeks)					0.888
• **38 to 39**	16	12.3	106	87.7	
• **More than 39**	4	10.6	34	89.4	
Parity					
• **0 to 2**	13	12.1	95	87.9	

• **More than 2**	7	13.5	45	86.5	1.000
Influential People					0.001
• **Spouse**	7	6.9	94	93.1	
• **Elder members**	0	0.0	11	100.0	
• **Self**	13	27.1	35	72.9	

DISCUSSION

The current research study was performed to assess the rate of Caesarean delivery on maternal request (CDMR) amongst women delivering in a tertiary care hospital. It was found that 12.5% of participants had maternal requests for Caesarean delivery despite the absence of any obstetric or medical indication. Even though the above percentage is much lower as compared to other international studies, it still proves the contribution of CDMR towards the overall rate of Caesarean section in our scenario [11,12,13].

One of the important results of the current study was the association of the primary decision-maker and maternal request for Caesarean delivery. It was observed that women who were making their own decisions about the delivery process were more likely to request for Caesarean delivery than the women whose decisions were influenced by their spouse and elderly family members (p=0.001). Moreover, the spouse was identified as the major influential person in the decision-making process. The above findings are indicative of the prominent role of family-based decision making process in maternal healthcare. This observation has also been supported by Angeja et al. [14] Similarly, Gamble and Creedy indicated that childbirth decisions made by women could be determined by their interpersonal relationships and the support networks that existed within the pregnancy period [15].

The results from the current study did not indicate any significant correlation between age of the mother and Caesarean delivery on maternal request. While there was a small percentage of women within the 30-40 age group requesting Caesarean delivery compared to those who are younger, the results were not statistically significant (p=0.802). Similar findings were recorded by Karlström et al., where maternal age alone was not an independent predictor of the preference for Caesarean delivery after adjustment of other socio-demographic factors [16]. However, some studies indicated a high rate of maternal-request Caesarean delivery in older mothers.

In addition, gestational age was also not significantly correlated with maternal request for c-section in the current study (p=0.888). Similar results have been

observed by Fenwick et al. in their study, which revealed that maternal preferences for mode of delivery were formed earlier in pregnancy and did not change much by slight differences in gestational age close to the due date [17]. This implies that maternal perception and preference rather than gestational age at admission are likely to dictate the choices related to delivery by Caesarean section [18].

Also, in our study, the parity factor was not found to correlate with the maternal request for delivery for c-section (p=1.000). The women with parities greater than two exhibited c-section request frequencies similar to those of women with lower parity. These observations coincide with those made by Nieminen et al. in their research, which showed that parity is not a significant factor in determining maternal preference for delivery by c-section in low-risk pregnancies [19]. However, other researchers have pointed out that experience of delivery may determine delivery choices of women, especially those with difficult deliveries [20].

CONCLUSION

Maternal requests accounted for 12.5% of all Caesarean deliveries within the studied group. There was no significant association between maternal request and the mother's age, gestational age, or parity. The main decision maker, on the other hand, had a significant effect on the probability of requesting a Caesarean delivery. It can be inferred from the results that family participation in the decision-making process of deliveries is of utmost importance.

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Conflict in the interest
The authors had no conflict related to the interest in the execution of this study.

Permission
Prior to initiating the study, approval from the ethical committee was obtained to ensure adherence to ethical standards and guidelines.

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