ORIGINAL ARTICLE

Determine the Prevalence and Factors Contributing to Increase the Caesarean Section Rate amongst post-partum women at Lyari Town Karachi, Pakistan

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ABSTRACT

Aim: To determine the prevalence and factors contributing to the increase in the Cesarean Section Rate among Post-Partum Women in Two Private Hospitals in Lyari Town, Karachi, Pakistan.

Methodology: A descriptive cross-sectional study was conducted from August to November 2022 after getting approval from the Institutional Review Board (IRB) of Kharadar General Hospital. The purposive sampling technique and self-structured questionnaires were used to achieve the sample size of 230 post-partum women with age < than 45 were included in the study whereas Women who were delivered vaginally, and those who were not willing were excluded in this research criteria and the data was analyzed by using SPSS V-16 software.

Results: The results showed that CSR was more observed between the ages of (26-35) (56%), and were mainly housewives (71.3%), matriculated (47.8%), and belonged to the Balochis family. As, CSR has drastically increased in Lyari Town Karachi, Pakistan (33%), and the rate of Planned Cesarean Section (CS) (63%) exaggerated more than an Emergency CS (37.4%).Scarred Uterus (32.1%)being an obstetrical factor, while Patient Preferences (30.4%) being a non-obstetrical factor were the most common reasons for Planned C-Section. Fetal Distress (33.9%) and Polyhydramnios (11.3%) were the reasons for an Emergency C-Section. Labor anxiety also influenced cesarean section. Besides, smokeless tobacco (Pan, Ghutka, Chalia, and Supari), (18% to 23%) was also identified as contributing factor among women.

Practical Implication: The study found a strong correlation between Corporate Social Responsibility (CSR) and demographic factors and medical practices, particularly among women aged 26-35. In Karachi, Pakistan, CSR activities increased significantly. Women prefer Planned Cesarean Sections over Emergency Cesarean Sections, with scarred uterus and patient preferences being primary reasons.

Conclusion: Planned CS is increasing unnecessarily in the health care setting, and this could be reduced by offering written guidelines, policy development, monthly medical audits, and advised CS when there is a medical necessity.

Keywords: Post-Partum Women, Planned Cesarean Section, Emergency Cesarean Section, Scarred Uterus, Fetal Distress.

INTRODUCTION

Caesarean Section is the most common and considered safe and preferable obstetric procedure when done electively and as well as it's also a life-saving surgical procedure[1]. As, according to World Health Organization WHO it suggested that CSR should not exceed10% to 15% unless any medical complication will arise.[1]However, CSR steadily rising in both developed and non-developed countries regardless of any medical morbidity.[1] Similarly, this evidence is also supported by the report of the Organization for Economic Corporation and Development Countries (OECD) that CSR has been increasing, ranging from 14.9% (Israel) to 54.9% (Turkey)[2]. There is no difference in the Pakistan context that the incidence of elective CSR is gradually increasing (69.7%) in public health care in Multan, Pakistan[3]. This study is also correlated to another study about the incidences of CSR and it observed more in Punjab (69.7%) than Sindh (17.4%), Khyber Pakhtunkhwa (KPK) (5.3%), and Baluchistan (1.70%)[4].

In addition, one of the retrospective studies done from 1st January to 30th June 2018 at Jinnah Postgraduate Medical Centre (JPMC), in Karachi, Pakistan to evaluate the rates and factors of C-Section amongst pregnant women and the data of six months were retrieved and it's showed that the rate of C-Section was observed more 760(61.2%) in multigravidas than 482 (38.8%) women who had delivered the first or second baby by surgically[5].

Likewise, CSR was observed in the same context in Fauji Foundation Hospital (49%), and Pak Emirates Military Hospital (54%) than in JPMC (36.5%) and Holy Family Hospital, Karachi (37%)[5]. The reasons for escalating the numbers of C-Sections globally were; Premature Rupture Membrane (PROM), Cephalic

Pelvic Disproportion (CPD), Prolonged Fatal Distress, Multiple Pregnancies, Breech or Transverse presentation, Ante-Partum Haemorrhage (APH), Mother with HIV infection, Maternal Preference, birth weight, and limited visits antenatal[5,6].

As well as, socioeconomic status such as; age, social class, education, occupation, and type of residence has been found to be strongly correlated reasons for CSR[4,5,7]. In addition, the authors disclosed that apart from medical factors, non-medical factors were also identified in one of the Asian countries and this qualitative study was done in both private and public sectors in Punjab, Pakistan and as cited that "perception about previous C-section, shared an experience with others women in the social circle, "family perception that vaginal delivery had not appropriate for our family, fear about vaginal delivery that it lose the beauty of the skin and its more painful than C-Section, women with high socioeconomic status and those who were not aware of the mode of delivery and this life threatening procedure its only done for the earning purposes or incentives by the gynecologist and its organization[8].

Hence, these kinds of feelings changed women's perceptions of normal delivery and moved their pregnancy finish up by the surgical deliveries. According to the restating literature CSR has been increasing worldwide especially in at urban areas[9]. However, no studies have been conducted in densely populated underprivileged urban areas where people of different cultures are residing with low socioeconomic status.

Therefore, this study had conducted in two private tertiary care hospitals, who are providing maternity services from 1918 and 1924 to their surrounding community[10,11] to determine the prevalence and associated factors of CSR in two private hospitals at Lyari town Karachi, Pakistan

METHODOLOGY

A descriptive Cross-sectional study was conducted in two private hospitals in Lyari Town Karachi, Pakistan from August to November 2022, and purposive sampling techniques was used to achieve a sample size of 230. All post-partum women with age < than 45 were included in the study whereas women who were delivered vaginally, and those who were not willing to participate in this research criteria. The approval was taken from the Ethical Review Committee of the Kharadar General Hospital. Written informed consent was also taken before data collection, and also maintained anonymity, and confidentiality throughout the study period. A tool of Self- Structure Questionnaire was checked by the IRB of the Kharadar General Hospital, and a panel of three experts who had maternity specialty before using it to ensure that all questions were consistently conveyed and carried the anticipated meaning of the study, and it used for data collection and data was analyzed by using SPSS V-16. Though, quantitative variables frequencies and percentages are presented in the form of tables.

RESULTS

Socio-Demographic Domain: According to the Socio-demographic domain, the majority of patients were in between 26-35 years 128(55.7%), matriculated 110(47.8%), Muslims 178(77.4%) and belonged to the Balochi community 61(26.5%). In addition, data also revealed that these women were from the extended family 137(59.6%), were mainly housewives 164(71.3%), and were non-addictive 110(48%) then as compared to Chalia/Supari 54(23%), Pan/Ghutka 41(18%), Cigarette/ Berri 22(10%) and alcoholic 3(1%) were identified (Table 1).

Table 1: socio Demographic domain

Variables	Characteristics	Frequency	%age
Mother age (years)	17-25	72	31.3
	26-35	128	55.7
	36-45	30	13.0
Education	Non educated	66	28.7
	Primary	11	4.8
	Secondary	6	2.6
	Matriculation	110	47.8
	Intermediate	28	12.2
	Graduation	9	3.9
Religion	Islam	178	77.4
	Hinduism	24	10.4
	Christian	27	11.7
	Others	1	0.5
Ethnicity	Memon	56	24.3
	Balochi	61	26.5
	Sindhi	44	19.1
	Punjabi	36	15.7
	Pathan	21	9.1
	Hindustani	12	5.3
Type of family	Nuclear family	93	40.4
	Extended family	137	59.6
Profession	House wife	164	71.3
	Working women	66	28.7
Level of income	Less than 20k	28	12.2
	20K-40K	115	50.0
	40K-60K	14	6.1
	60K-100K	35	15.2
	More than 100k	38	16.5
Feelings of craving or addicting	Pan/Ghutka	41	18
Chalia/Supari	Chalia/Supari	54	23
	Cigarette/Bheri	22	10
	Alcohol	3	1.0
	Mo addiction	110	48

Clinical Domain: In the clinical domain, most participants 99, 43%) were visited by their doctors about 11-15 times and their weights were between 50-60kg 122(53%). Furthermore, the results of our study also revealed that most of the participants had

undergone to Planned C-Section 144(62.6%) as compared to an emergency C-Section 86(37.4%), and a majority had their second pregnancies 83(36%). As regards to Planned C-Section, data also revealed that scarred Uterus was the most leading cause of caesarean section 74(32.1%) as compared to mothers' preferences 70(30.4%), malposition 24(10.4%), Intra Uterine Growth Retardation 19(8.5%), Large Fetus 25(10.8%), Multiple Fetus 15(6.5%), and macrosomia 3(1.3%). On the other hand, in emergency C-Section fetal distress 78(33.9%), and Polyhydramnios 26(11.3%) were identified the main cause, as compared to other related causes of an emergency C-Section (Table 2).

Table 2: Clinical domain

Variables	Characteristics	Frequency	%age
Antinatal Visits	Less than 5	17	7.4
	6-10 visits	90	39.1
	11-15 visits	99	43.0
	More than 15 visits	24	10.5
Patient's current weight	Below 50kg	17	7.4
	50-60kg	122	53.0
	60-70kg	70	30.4
	More than 70kg	21	9.2
Mode of delivery	Planned CS	144	62.6
	Emergency CS	86	37.4
Type of pregnancy	Primi Gravida	66	28.6
	Second Gravida	83	36.0
	Multi gravid (1-3)	68	29.5
	Grand Multi Gravida >4	13	5.9
Reason of planned CS	Multiple fetus	15	6.5
	Mallposition	24	10.4
	Large fetus	25	10.8
	Mother's preference	70	30.4
	Scarred uterus	74	32.1
	Intra uterine growth	19	8.5
	Retardation (IUGR) Macrosomia	3	1.3
Reason of emergency CS	Bad presentation	10	4.3
	Preterm delivery	16.5	7.1
	Pre mature Rupture of Membrane (PROM)	15	6.5
	Polyhydramnios	26	11.3
	Oligohydramnios	10	4.3
	Fetal distress	78	33.9
	Diabetes status	10	4.3
	Prolonged obstructed labor	12.5	5.4
	Eclampsia Failed VBAC trial	10.5	4.5
	Cord prolapse	8	3.4
	Placenta previa	15	6.5
	Antepartum	11.5	5
	Haemorrhage (APH)	7	3.5

Socio-Psychological Domain: Most participants 136(59.1%) performed their surgical deliveries at their own request. Labor anxiety 181(78.7%) also contributed to cesarean section, whereas reasons for caesarean section are not supported by the enforcement of their relatives 225(97.8%), financial instability 126(54.8%) and a prolonged period of hospitalization 189(82.2%) (Table 3).

Table 3: Socio Psychological domain

Variables	Characteristics	Frequency	%age
Patient request	Yes	136	59.1
	No	94	40.9
Enforced by relative	Yes	5	2.2
	No	225	97.8
Labour anxiety	Yes	181	78.7
	No	49	21.3
Financial overburdened.	Yes	104	45.2
	No	126	54.8
Extended period of hospitalization	Yes	41	17.8
	No	189	82.2

DISCUSSION

According to another study, results showed that planned CS has increased due to scarred uterus (50%), as this result is consistent with the recent study that planned CS has increased due to the reason of previous CS (62.6%)[8,13,15-19]. Pertaining to the recent study, results also indicated that planned CS has increased due to patient's preferences (30.4%)as this result is also similar to the another study[6,13,15,18-,20]. With regards to the results of the current study, that emergency CS has increased due to fetal distress (33.9%), as this result is congruent with another study that the rate of emergency CS was more observed due to fetal distress (33.5%)[6,17].

Furthermore, labor anxiety also contributed to the caesarean section and most women from urban areas made a choice of delivery as CS to keep themselves away from the painful outcome and also were concerned about the safety of the baby and unfavorable procedures during labor. While this study is related with the previous study that anxiety during labor leads women towards the CS0[20,21].

Similarly, one of the cross-sectional studies conducted in the department of Obstetrics and Gynecology Pak Emirates Military Hospital, Rawalpindi from Jan 2018 to Jun 2018 where the authors revealed that fear of maternal in the third trimester is relatively high than the first and second trimester and it enforced by maternal to have the CS because of intense fear of childbirth.[22,23] Also this study conducted in Sakarya University Education and Research Hospital, Turkey where Fear of Childbirth and Post-Partum Period Scale (FCPPS) was used to identify anxiety during childbirth and results are indicated that patients who are 365(73%) unemployed 299(59.8%) and graduated, are moving towards the CS because of intense fear of childbirth during in third trimester. Similarly, one of the cross-sectional studies conducted in the Department of Obstetrics and Gynecology at Pak Emirates Military Hospital, Rawalpindi, from January 2018 to June 2018 revealed that fear of childbirth is significantly higher in the third trimester compared to the first and second trimesters. This increased fear among expectant mothers during the later stages of pregnancy often leads to a preference for cesarean section (CS) due to intense anxiety about the birthing process. The study underscores the importance of addressing maternal fears to potentially reduce the rate of elective CS[18,19,20].

Additionally, a similar study conducted at Sakarya University Education and Research Hospital in Turkey utilized the Fear of Childbirth and Post-Partum Period Scale (FCPPS) to assess anxiety levels during childbirth. The findings indicated that a significant proportion of patients, 365(73%) unemployed and 299(59.8%) graduated, exhibited a preference for CS due to intense fear of childbirth in the third trimester. These results highlight the crucial role that socioeconomic and educational factors play in maternal anxiety and decision-making regarding childbirth methods[21,22].

CONCLUSION

The study concludes that C-Section Rate has drastically increased (33%) in both hospitals in Lyari Town Karachi, Pakistan. As prevalence of Planned C-Section (Scarred Uterus and Patients Preferences) seemed higher than an Emergency C-Section (fetal distress and Polyhydramnios)

Limitations: The limitation of this research study is that it was done only in private hospitals, as approval from public hospitals could not be obtained due to time constraints. Part from this, the research was only conducted in two private hospitals in Lyari town Karachi, and therefore, this study could not be generalized.

Recommendations: The result of this study suggests Written guidelines and policy development for the health sector, monthly medical audits in both public and private hospitals, commitment of Obs. /Gynae doctors to lower the C-section rate, C-Section advised when there is medical necessity, and provides antenatal teaching to aware of the outcome of a delivery and to cope with painful delivery by reducing their anxiety in their third trimester

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