Bangladesh J Obstet Gynaecol, 2025; Vol. 40(2): 115-121

Review Article

Caesarean Section on Maternal Request (CSMR) : The Emerging Challenge

SARIA TASNIM[1], SUMMYIA NAZMEEN[2]

Abstract

Caesarean section(CS) is most common surgical procedure done to protect mother and baby from untoward outcome of childbirth. Globally there is increasing trend of Caesarean section and a significant proportion is reported to be done on maternal request in absence of definite obstetric or medical indication. This is emerging as an issue of concern.

The objectives were to explore the determinants of Caesarean section on maternal request, highlight potential risks and benefits of each mode of delivery and to formulate recommendations to optimize the rate of Caesarean section on maternal request.

A literature review was conducted using Google scholar, Medline and Pubmed to identify factors that were relevant as an argument to meet the request for CS on maternal choice.

Main determinants of CSMR are fear of pain during childbirth, uncertainty of fetal wellbeing in normal labour or chance of emergency CS during course of vaginal birth, previous negative experience of childbirth, perception of CS being safer and regarding CSRM as their right. Both mode of delivery has its own risk and benefits that has to be discussed with the women during pregnancy so that the women can have enough time to think and prepare herself. The attending health professional should be aware of his/her professional competence and duty and not influenced by any undue incentives or convenience. The basic ethical principles of autonomy, beneficence, non-malfiscence and justice are equally important for helping women decide the mode of delivery.

Keywords: *C-section on maternal request, cesarean delivery, indications, women's autonomy, maternal health, neonatal outcome*

Introduction

Caesarean section is an essential intervention for delivering baby in a condition where vaginal delivery is not possible or are threat to wellbeing of mother or newborn or both. It should be done on time, on definite indication be it obstetric or medical or individual choice and done by a competent person. For last few decades a new indication that is cesarean delivery on maternal request (CSMR) is noted. CSMR might have the following two characteristics: (1) performed before the onset of labor and (2) performed in the absence of a medical indication. FIGO recommends that CDMR is defined as a primary elective cesarean delivery performed at term in a singleton pregnancy without any obstetric and/or medical reasons[1]. According to American College of Obstetricians and Gynecologists (ACOG) CSMR is defined as a primary cesarean section at maternal request, in the absence of any maternal or fetal indication, performed after 39 completed weeks of gestation or with verification of pulmonary maturity[2] .

Trend of CS in different countries

Worldwide the rate has been increased from 6% in 1990, 12% in 2000 to 21 % in 2015[3] . The rate varies between continents and also within countries. There are both under use and overuse of CS from the proportion of 10–15% of births that is thought to be

1. Professor Gynae & Obs, Dhaka Community Medical College
2. Registrar, Gynae & Obs, Dhaka Community Medical College

Address of Correspondence: Saria Tasnim, MBBS, FCPS, MMEd, Diploma in Community Epidemiology
email: sariatasnim2007@gmail.com

optimal by World Health Organization[3]. Underuse indicate that women in need are not getting the service and at risk of mortality and morbidity. There is also evidence that increasing rate of CS higher that 10% is not associated with reductions in rate of maternal and newborn mortality. Average rate of CS range from 5% in sub-Saharan Africa to 42.8% in Latin America and the Caribbean[4] . CS is associated with higher socioeconomic status in low-income and middle-income countries, while the opposite has been shown in high-income countries[5]. In European studies, preference for CS is associated with psychosocial vulnerability[6]. Greater access to clinical obstetric care and increased safety of surgery procedures contemplate CS more preferable than before[7]. It is projected that by 2030 one third of all births globally likely to be delivered by CS[6,8]. A major contributor to this increase rate is proposed to be low and middle income countries through over medicalisation of childbirth in those countries[9] .

A major contributor to increasing trend of CS is increase of non-medically indicated CS in many middle-income and high-income countries. Approximately 42% 0f CS are not medically indicated[10] . Fear of litigation can be stressful to physicians and influence their decision[11].In some countries like Bangladesh where doctors' safety is vulnerable and Chaos in the form of Mob justice is emerging as common threat. In this context anybody can accuse or assault the doctor physically or humiliate in social media if any untoward event occurs after childbirth without waiting to find out the truth. So these may provoke physicians to opt for elective CS or giving more emphasis to maternal choice.

Trend of MRCS in different countries

Prevalence of CSMR vares widely across different countries and range may vary between 0.2% t0 42% of all deliveries[12]. Access to CSMR is not open to all. Opinion may vary. In some countries CS is reserved for particularly difficult or high-risk births, and planned vaginal delivery is the presumed and recommended mode of delivery for the majority of women[13]. In Thailand approximately 53% obstetrician will consider CS on maternal request[14], however, a survey from England and Wales in 2001 found fewer than 30% of obstetricians would refuse a request for MRCS[13]. In most countries CSMR contributes to less than 5.0% of all deliveries[15]. It is difficult to get actual prevalence of CSRM due to lack of information on birth certificates, or discharge notes and lack of recording of selection of elective CS.

Evidence shows CSMR rate in China exceed 24%[14]. The proportion of CSRM is reported 8% Sweden, 5% in Switzerland, 3.2% Denmark, 3% in USA and Australia of all births[16] . In India it is reported to be 17.2 to 48% depending on specific region[17] .The rate of CSRM increased from 0.6% to 4.6% from the early 1990s to 2015 in Sweden[18] and from 4.5% to 9% of all cesareans in Italy[19]. Proportion of CSMR was 11-fold higher in upper middle-income countries than in high-income countries. The Middle East had the highest CSMR rates followed by East Asia[15] .

The incidence of CSMR differs in public and private hospitals, with reporting rates of between 1% and 48% in public sector health care systems and 60% in the private sector[20]. Higher preference for cesarean delivery was reported by women with a previous cesarean (29.4% vs. 10.1%[21]. The view of the World Health Organization appears to be that healthcare systems should aim to reduce rates of CS performed without clinical indication, and it characterizes these CS as "unnecessary"[22]. In many countries guidelines now recommend that women who request caesarean births in the absence of medical indication should be provided with one but after a thorough discussion of their reasons for requesting a CS and after ensuring that they are informed of the associated risks of different modes of birth and still prefers CSMR [23].

Determinants of maternal choice for CS

Women opt for CS from fear of labour pain or zoophobia, pelvic floor damage, incontinence of urine and faces and negative effect on their sexuality or sexual relationship. Women with severe tocophobia have increased risk of Post traumatic distress syndrome (PTDS) and depression[12] . Convenience can be a reason in some cases like astrological belief of a lucky day of birth or birth on an auspicious day. There may be time adjustment to schedule the birth when it is most suitable for family or obstetrician for some reason like exam, travel etc. Previous negative experience of vaginal birth including sub optimal care, experience of disrespect and abuse, interruption of privacy, fear of requiring emergency surgical delivery, fear of being left alone while in labour are important determinant of choice for CS[24] . Media portrayal and social media can influence women's choice[25]. Birth by CS often presented as controllable, convenient, fashionable and modern[26] .

In Bangladesh over the years institutional delivery has increased from 3% in 1990 to 65% in 2022[27]. Birth in facility is more in urban areas than rural (56% vs. 40%). Delivery in facility is less in women in lowest wealth quantile (42%) and much more in highest wealth quantile (97%). Proportion of delivery in private health facilities increased 4.5 times from 2017 to 45%[27] . This is reflected in rate of cesarean section higher in urban than rural (49% vs. 29%) and proportion of CS in private facility is 83% compared to 35% in public facilities. Perception of having better care, availability of modern technologies and availability of specialist doctors may be inspirational for people to use private centres[28]. Profit generating tendency of private facilities may also exploit physicians to choose CS without rigorous scrutiny[29]. Studies also highlighted the impact of maternal age, higher education levels in both women and their partners, parity, household wealth, more access to antenatal care, maternal obesity, delivery location, and media exposure on greater likelihood of opting for a C-section[30]

In a study from India significant factors associated with CSRM were high BMI, previous pregnancy complication, previous CS, psychological factors. The social factors included family dynamics like husband's advice, parent or parent in laws advice, delivery mode of friends, relatives or doctors advice[16]. A previous CS pose 25 times more chance of CSRM compared to vaginal delivery in different countries. Figure 1 is a schematic representation of determining factors

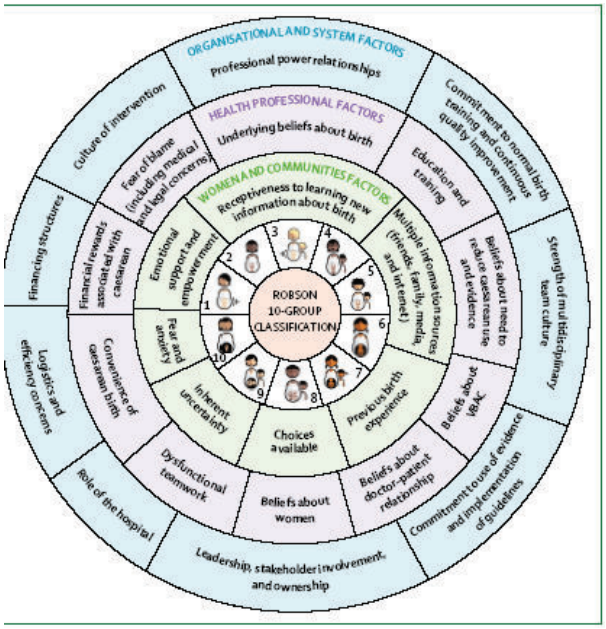

Figure 1: *schematic representation of factors that affect frequency of caesarean section*[23]

related to women, society, health provider and care systems. It also highlighted some remedial measures to optimize the CS rate [23]

Vaginal delivery is advocated safe as it is natural and deviation from this is undesirable. However, the outcome of VD is unpredictable especially in low resource countries where resources for fetal monitoring is limited, new born can be at risk and immediate newborn resuscitation and subsequent care can be inadequate. Most women perceive CS to be safer and will insist "I do not want to take any risk"[31]. But both mode of birth can affect infant and child health outcome. An elective CS cannot guarantee a safe outcome and has short term and long term consequences especially in repeat CS. There is increased chance of requiring a Blood transfusion, risk of anaesthetic hazards, Post partum hemorrhage, need for peripartum hysterectomy ,sepsis and wound dehiscence[32]. There are chances of Placenta previa and accreta and the risk increases with number of cesarean sections, intra abdominal adhesions, ectopic pregnancy and uterine rupture. For babies there is increased risk of prematurity, respiratory distress, admission to neonatal care unit, infections, neonatal death[33].

The dilemma

The decision for mode of delivery should consider the right of newborn to have safe birth. It is misleading to present planned vaginal delivery risk free or not discussing the risks at all[13]. There is evidence that women who deliver vaginally experience urinary incompetence more than a year,15% experience faecal incontinence and one in 7 deliveries require episiotomies with long term pain and other difficulties[34]. Vaginal delivery also increases chance of intracranial haemorrhage. CS may reduce the risk of intrapartum death, hypoxia and birth trauma. It may also prevent complications like shoulder dystocia, Brachial palsy or non progress of labour, meconium aspiration[35]. Practitioners are more likely to be sued for complication during vaginal delivery than planned CS[5].

CS is often viewed by mothers as a safer mode. However, apart from immediate complications for both mother and baby there is evidence that a planned CS may have increased risk of Breastfeeding problems, may affect the development of child's immune system predisposing to development of immune mediated disease like asthma, allergies, diabetes mellitus type I, and celiac disease[36] .

In considering rate of CS it is often proposed to reduce unnecessary CS [22] but the concept of necessity is not clearly established. If a CS is deemed necessary for a particular woman she can not be forced to have one. On the other hand one can not deny performing a CS if it is not medically necessity[13]. Some argues that women's request for CS can be count as clinical need because in majority cases the decision is based on fear that any underlying condition may be exacerbated by vaginal delivery or may later need emergency CS. Previous traumatic birth or other assault or any negative experience during childbirth can be psychological threat. In CSRM weightage is given on patient autonomy and individual right to self determination but treatment decisions should also incorporate professional judgment, ethical consideration, system limitations etc. Trust and sense of security among women about health care provider is crucial.

Private facilities perform CSRM twice more frequently than public hospital[12]. Financial incentives and logistical support linked to CS may be a factor from professionals' perspective. Non medically indicated CS place a disproportionately higher burden on health system.

Recommendations to reduce CSRM

Providing comprehensive prenatal education and emotional support, open discussions of risk and benefit of each mode of delivery, ensuring access to adequate obstetric analgesia, relaxation training programs led by midwives , companion support during labour can help to take appropriate decision for CSRM[37]. Audit of caesarean section as per ROBSON classification can ensure more justified option[38]. Insurance reforms equalizing physician fee for birth and CS and requirement for a second opinion for CS can be tried[39].

A collaborative midwifery –obstetrician model of care that is making an arrangement where care is provided by a midwife with 24 hour back up from an obstetrician in case of need can be helpful[39]. Promotion of Trial of labour after CS (TOLAC) and vaginal birth after caesarean section (VBAC) may be a good choice for reducing unnecessary Cs [40]. Regulating bodies should constantly monitor private delivery care centers. Practical skills training for doctors and midwives, and reintroduction of vaginal instrumental deliveries like Forceps and Ventouse to reduce the need for CS in the second stage of labour can reduce CSRM. The hospitals and delivery centres should provide supportive, welcoming, safe and private environment. Implementing national guidelines in centres can standardize the decision options[39].

A discussion about mode of delivery should be started since early pregnancy so that there is sufficient time for listening and counseling the mother. Responding to women's request for CS may lead to health care inequities[41] . Response to autonomy entails right to reject unwanted treatment but that does not infer a right to obtain treatment on demand unless the pros and cones of different mode of delivery is discussed comprehensively[42]. However, in certain special cases such as psychosocial difficulties, previous negative experience and specific fear or anxiety for vaginal birth it is beneficial to comply with CSRM than subjecting her to vaginal birth against her will[37] . Measures to be implemented to identify and manage the determinants of CSRM to ensure highest possible standards of health and well being of women as well as help health care providers to practice safely[43]. Sincere efforts to optimize CSRM will help to reduce global social, cultural, medical and economic burden to population and health system for childbirth.

References

1. National Institute for Health and Care Excellence (NICE). Caesarean birth [NG192] (2021)
2. ACOG. CO 761: Cesarean Delivery on Maternal Request. 2019;133(761):73–7. Available from: https:// www. acog. org/ clini cal/ clinical- guida nce/ commi ttee- opini on/ artic les/ 2019/ 01/ cesar ean- deliv ery- onmaternal- reque st# s3
3. Betran AP, Ye J, Moller AB, Zhang J, Gulmezoglu AM, Torloni MR. The increasing trend in Caesarean section rates: global, regional and national estimates: 1990–2014. *PLoS One* 2016; **11:** e0148343
4. Betran AP, Ye J, Moller AB, et al. Trends and projections of caesarean section rates: global and regional estimates. *BMJ Glob Health*. 2021;6(6):e005671.
5. Boerma T, Ronsmans C. Global epidemiology of use of and disparities in caesarean sections –. *Lancet*. 2018;392: 1341-1348.
6. Colomar M, Opiyo N, Kingdon C, et al. Do women prefer caesarean section? A qualitative

evidence synthesis of their views and experience. *PLOS ONE*. 2021;16(5):e0251072.

7. WHO. Statement on caesarean section rates. Geneva: World Health Organization, 2015. http://www.who.int/reproductivehealth/publications/maternal_perinatal_health/cs-statement/en/ (accessed Sept 4, 2018).
8. World Health Organization. Caesarean section rates continue to rise, amid growing inequalities in access. 2021.
9. Etcheverry C, Betrán AP, de Loenzien M, Kaboré C, Lumbiganon P, Carroli G, Mac QNH, Gialdini C, Dumont A; QUALI-DEC research group. Women's caesarean section preferences: A multicountry cross-sectional survey in low- and middle-income countries. Midwifery. 2024 May;132:103979. doi: 10.1016/j.midw.2024.103979. Epub 2024 Mar 22. PMID: 38520954.
10. Dumont A, Guilmoto CZ. Too many yet too few: the double burden of caesar-ean births. Popul Soc. 2020;581:1–4.
11. Sharpe, Abigail, Waring, Gareth, Rees, Jon, McGarry, Kenneth and Hinshaw, Kim (2015) Caesarean section at maternal request - the differing views of patients & health care professionals: a questionnaire based study. European Journal of Obstetrics & Gynecology and Reproductive Biology, 192. pp. 54-60. ISSN 03012115
12. Sethi N, Kumar Rajaratnam R, Abdullah N. Caesarean Section on Maternal Request [Internet]. New Aspects in Cesarean Sections. IntechOpen; 2023. Available from:http://dx.doi.org/10.5772/intechopen.109589
13. Brown RC, Mulligan A. 'Maternal Request' Caesarean Sections and Medical Necessity. Clin Ethics. 2023 Sep;18(3):312-320. doi: 10.1177/14777509231183365. Epub 2023 Jun 26. PMID: 37635933; PMCID: PMC7614977.
14. Deng R, Tang X, Liu J, Gao Y, Zhong X. Cesarean delivery on maternal request and its influencing factors in Chongqing, China. BMC Pregnancy Childbirth. 2021;21:384. Medline:34011289 doi:10.1186/s12884Fram KM, Saleh S, Fram F, et al. Maternal request for cesarean delivery; a solid indication or a window for complications; a teaching hospital experience. *Obstet Gynecol Int J*. 2023;14(2):42 46. DOI: 10.15406/ogij.2023.14.00691
15. Begum T, Saif-Ur-Rahman KM, Yaqoot F, Stekelenburg J, Anuradha S, Biswas T, Doi SA, Mamun AA. Global incidence of caesarean deliveries on maternal request: a systematic review and meta-regression. BJOG. 2021 Apr;128(5):798-806. doi: 10.1111/1471-0528.16491. Epub 2020 Oct 8. PMID: 32929868.
16. Singh S, Swain D. Prevalence and factors associated with caesarean delivery on maternal request and its effect on maternal and foetal outcomes in selected tertiary care hospital, Odisha, Southeastern India. J Glob Health. 2025;15:040
17. The Demographic and Health Surveys Program. India National Family Health Survey (NFHS-4) 2015-16. Mumbai, India: International Institute for Population Sciences (IIPS); 2017.Available: https://dhsprogram.com/ pubs/pdf/FR339/FR339.pdf. Accessed: 29 July 2024.
18. da Silva Charvalho P, Hansson Bittár M, Vladic Stjernholm Y. Indications for increase in caesarean delivery. Reprod Health. 2019 May 30;16(1):72. doi: 10.1186/s12978-019-0723-8. PMID: 31146737; PMCID: PMC6543674.
19. Tranquilli AL, Giannubilo SR. Cesarean delivery on maternal request in Italy. *Int J Gynecol Obstet*. 2004;84:169-170.-021-03866-7
20. Lavender T, Hofmeyr GJ, Neilson JP, Kingdon C, Gyte GML. Caesarean section for non-medical reasons at term. *Cochrane Database Syst Rev*. 2012;2012(3):CD004660.
21. Mazzoni A, Althabe F, Liu NH, et al. Women's preference for caesarean section: a systematic review and meta-analysis of observational studies. *BJOG*. 2011;118:391-399.
22. WHO recommendations non-clinical interventions to reduce unnecessary caesarean sections. Geneva: World Health Organization, 2018
23. Betrán AP, Temmerman M, Kingdon C, Mohiddin A, Opiyo N, Torloni MR, Zhang J, Musana O, Wanyonyi SZ, Gülmezoglu AM, Downe S. Interventions to reduce unnecessary caesarean

sections in healthy women and babies. Lancet. 2018 Oct 13;392(10155):1358-1368. doi: 10.1016/S0140-6736(18)31927-5. PMID: 30322586.

24. Størksen HT, Garthus-Niegel S, Adams SS, Vangen S, Eberhard-Gran M. Fear of childbirth and elective caesarean section: a population-based study. BMC Pregnancy Childbirth. 2015;15:1–10.

25. Fredriksson M, Holmström IK, Höglund AT, Fleron E, Mattebo M. Caesarean section on maternal request: a qualitative study of conflicts related to shared decision-making and person-centred care in Sweden. Reprod Health. 2024 Jul 2;21(1):97. doi: 10.1186/s12978-024-01831-z. PMID: 38956635; PMCID: PMC11221017.

26. Fioretti B, Reiter M, Betran A, Torloni M. Googling caesarean section: a survey on the quality of the information available on the internet. *BJOG* 2014; **122:** 731-39

27. National Institute of Population Research and Training (NIPORT) and ICF. 2024. Bangladesh Demographic and Health Survey 2022: Final Report. Dhaka, Bangladesh, and Rockville, Maryland, USA: NIPORT and ICF

28. Ahmmed F, Manik MMR, Hossain M.J (2021) Caesarian section (CS) delivery in Bangladesh: A nationally representative crosssectional study. PLoS ONE 16(7): e0254777. https://doi.org/10.1371/journal.pone.0254777

29. Nahar Z, Sohan M, Hossain MJ, Islam MR. Unnecessary Cesarean Section Delivery Causes Risk to Both Mother and Baby: A Commentary on Pregnancy Complications and Women's Health. Inquiry. 2022 Jan-Dec;59:469580221116004. doi: 10.1177/00469580221116004. PMID: 35920002; PMCID: PMC9358345.

30. Turjo, Estiyak Ahmed & Rahman, Ashikur & Noor, Md & Shakib, Arif. (2025). Factors influencing cesarean delivery in Bangladesh. Discover Public Health. 22. 10.1186/s12982-025-00850-w.

31. Ghotbi F, Akbari Sene A, Azargashb E, Shiva F, Mohtadi M, Zadehmodares S, Farzaneh F, Yasai FA. Women's knowledge and attitude towards mode of delivery and frequency of cesarean section on mother's request in six public and private hospitals in Tehran, Iran, 2012. J Obstet Gynaecol Res. 2014 May;40(5):1257-66. doi: 10.1111/jog.12335. Epub 2014 Apr 2. PMID: 24689693.

32. Jane Sandall Rachel M TribeLisa Avery Glen Mola Gerard HA VisserCaroline SE Homeret al. Short-term and long-term effects of caesarean section on the health of women and children *The Lancet*Vol. 392No. 10155P1349-1357

33. Etcheverry C, Betrán AP, de Loenzien M, Kaboré C, Lumbiganon P, Carroli G, Mac QNH, Gialdini C, Dumont A; QUALI-DEC research group. Women's caesarean section preferences: A multicountry cross-sectional survey in low- and middle-income countries. Midwifery. 2024 May;132:103979. doi: 10.1016/j.midw.2024.103979. Epub 2024 Mar 22. PMID: 38520954

34. NHS. Episiotomy and perineal tears, https://www.nhs.uk/pregnancy/labour-and-birth/what-happens/episiotomy-andperineal-tears/#:<":text=Up%20to%209%20in%2010,to%20be%20born%20quickly%2C%20or (2020, 14 February 2023).

35. Fram KM, Saleh S, Fram F, et al. Maternal request for cesarean delivery; a solid indication or a window for complications; a teaching hospital experience. *Obstet Gynecol Int J*. 2023;14(2):42-46. DOI: 10.15406/ogij.2023.14.00691

36. Muhandule, C.J.L.S., Benetti, C.M.S., Fogulin, L.B. et al. Caesarean delivery on maternal request: the perspective of the postpartum women. BMC Pregnancy Childbirth 24, 257 (2024).https://doi.org/10.1186/s12884-024-06464-5

37. Sorrentino F, Greco F, Palieri T, et al. Caesarean section on maternal request–ethical and juridic issues: a narrative review. *Medicina*. 2022;58:1255.

38. Ramasauskaite D, Nassar A, Ubom AE, Nicholson W; FIGO Childbirth and Postpartum Hemorrhage Committee. FIGO good practice recommendations for cesarean delivery on maternal request: Challenges for medical staff and families. Int J Gynaecol Obstet. 2023 Oct;163 Suppl 2:10-20. doi: 10.1002/ijgo.15118. PMID: 37807587.

39. Robson M. Classification of cesarean sections. *Fetal Matern Med Rev* 2001;**12:** 23–39.

40. Mi Y, Qu P, Guo N. et al. Evaluation of factors that predict the success rate of trial of labor after the cesarean section. *BMC Pregnancy Childbirth.* 2021;21:527.

41. Keag OE, Norman JE, Stock SJ. Long-term risks and benefits associated with cesarean delivery for mother, baby, and subsequent pregnancies: Systematic review and meta-analysis. PLoS Medicine. 2018;15(1):e10024

42. Nilstun, T., Habiba, M., Lingman, G. *et al.* Cesarean delivery on maternal request: Can the ethical problem be solved by the principlist approach?. *BMC Med Ethics* **9**, 11 (2008). https://doi.org/10.1186/1472-6939-9-11