ORIGINAL RESEARCH ARTICLE

Understanding The Reasons for High Rates of Caesarean Section Deliveries in Telangana, South India: An Explorative Study

Karthik Jirra[1], Surya Durga Prasad M[2], Shamanna B R[3*]

[1,2,3]School of Medical Sciences, University of Hyderabad, Hyderabad, India

DOI: 10.55489/njcm.141120233324

ABSTRACT

Background: Telangana continues to top the list of the highest number of caesarean section (C-section) deliveries in the country for the financial year 2019-2020. As per NFHS-5 it is about 60.7% deliveries out of the total number of all institutionalized childbirths. This study aims to address the crucial research gap by qualitatively exploring the reasons for the high rates of unnecessary C-section rates in the state of Telangana.

Methodology: A purposive sampling was done across the health care facilities and geographies in the State & the districts were selected based on high, medium and low CS rates. A 360-degree stakeholder engagement approach was taken for a qualitative exploration to find out the reasons.

Results: Medical, behavioural, cultural, and infrastructure including health system related factors have contributed to the rise of C-sections, particularly unnecessary elective C-sections. Limited trained personnel for doing normal deliveries in the public sector, infrastructure and safety issues for mother and child, and a preference for painless deliveries, and prior CS delivery stood out.

Conclusions: As per the study's findings, it can be said that non-medical reasons account for a high percentage of C-sections in Telangana.

Key-words: Caesarean sections, Maternal health, institutional Births, Non-Medical Reasons, Telangana

ARTICLE INFO

Financial Support: HFO/RCH/TS/2018/205, UNICEF Area Office for AP, Telangana and Karnataka
Conflict of Interest: None declared
Received: 16-08-2023, **Accepted**: 25-09-2023, **Published**: 01-11-2023
***Correspondence:** Prof. B.R. Shamanna (Email: brsham@uohyd.ac.in)

How to cite this article: Jirra K, Prasad MSD, Shamanna BR. Understanding the Reasons for High Rates of Caesarean Section Deliveries in Telangana, South India: An Explorative Study. Natl J Community Med 2023;14(11):704-710
DOI: 10.55489/njcm.141120233324

www.njcmindia.com | pISSN09763325 | eISSN22296816 | Published by Medsci Publications

INTRODUCTION

According to the World Health Organization (WHO), Cesarean sections (CS) are effective in saving maternal and infant lives but it should be done only when required for medically indicated reasons. The WHO advocates a maximum range of "10–15%" of C-sections at community levels to result in substantial improvement in maternal and child healthcare outcomes.[1] A 2015 systematic review by WHO indicated that at higher percentages of above 16% the C-section deliveries does not contribute to a significant reduction in Maternal Mortality Rate and Infant Mortality Rate.[2] The recent nationally representative surveys indicate that, C-sections have gradually increased in developing countries. India for example while still accounting for over 1/5th of the global MMR, also has a substantially high percentage of C-section deliveries standing at 21.5% as per the 5th round of National Family Health Survey.[3] Within India, the South Indian states of Telangana, Andhra Pradesh, Kerala, Karnataka and Tamil Nadu have a substantially higher percentage of C-section deliveries ranging from 31.5% to 60.7% .[4] The state of Telangana with over 97% institutional deliveries has an alarmingly high rate of CS deliveries at 60.7%.[5] Studies report alarmingly high-rates of C-sections in India in general and Telangana in specific.[6] Unwanted C-sections result in inefficient use of health system resources, risk intra operative and post-operative complications and impacts the future health and wellbeing of the mother traditionally. Evidence also indicates that unwanted C-sections can also result in high out of pocket expenses, debt and push the families into poverty. There is also evidence pointing to the longer-term impact of C-sections in mothers that is emerging.[7]

The alarming raise in elective/unwanted C-sections is a public health problem which needs to be prioritized at the highest level. One of the key strategies for C-section is decision-making in the system and family understanding. The models explaining decision making report healthcare decision making as a consultative process involving health workers, patients and their family members.[8] In this regard, it is essential to understand decision making for C-section employing a multi-stakeholder perspective involving mothers, family members and healthcare providers. While evidence from representative surveys like NFHS and DLHS indicate the high prevalence of C-section deliveries in Telangana, little is known about the important reasons for the expectant mothers and their families to opt for C-section deliveries.

METHODOLOGY

In consensus with the larger aim of developing a framework to reduce unwanted CS rates in the state, we undertook an explorative approach that was an 360-degree inquiry approach using qualitative methods to understand the reasons for high rates of C-Sections. This was done through in-depth interviews and focus group discussions of family members (mothers, mother-in-law's, husbands/ spouses/partners) of recently delivered mothers, staff nurses, ASHA workers, ANMs, Medical Officers of PHCs, and Specialist Obstetrician and Gynaecologists. The sampling was conducted purposively to ensure rich context and variability across the healthcare facilities and geographies. The selection of the districts was to represent high, medium and low caesarean section rates from the state government published data to understand if there is a difference in the reasons for higher or lower C-Section rates. A total of 44 Focus group discussions with minimum of 6 and maximum of 10 members bringing the total number of participants in all of the FGDs to 165. and 3 key-informant interviews were conducted which included 2- District medical officers (DMHO) and 1- fixed day health service officer (FDHS). Data from nearly 210 in depth interviews (IDI's) recently delivered mothers was collected in the same locations as part of the quantitative arm (Table 1,2 & 3) of this study.

The developed and pretested guide and interview schedule as appropriate was administered by the researchers. Before starting the FGD, the moderator explained the terms and conditions including seeking informed consent and conducted in local Language (Telugu), converted to English with the help of Translator.

Ethics committee approval (The ethical clearance was obtained from Institutional Ethics Committee of University of Hyderabad (Ref no: UH/IEC/2020/235) and permissions from Joint Director [MHN] C/o CH&FW, TS was taken to conduct the FGDs. Each FGD/Interview lasted on average of 50 minutes. Data was transcribed manually. Data analysis was performed employing thematic analysis approach. The focus group discussions & interviews were coded inductively. In vivo-codes and process codes were developed.

The data analysis was performed manually and using free versions of the qualitative analysis software available on the internet. The themes reflected various dimensions which influenced the decision-making concerning C-section deliveries.

RESULTS

The analysis of in-depth interviews and focus group discussions with post-natal mothers, husbands, mother-in-law, mothers, ASHA workers, Staff Nurse, and medical officers yielded the following themes. The C-Section preference was found to be largely influenced by a multitude of reasons which are represented in figure 1 & Table 4.

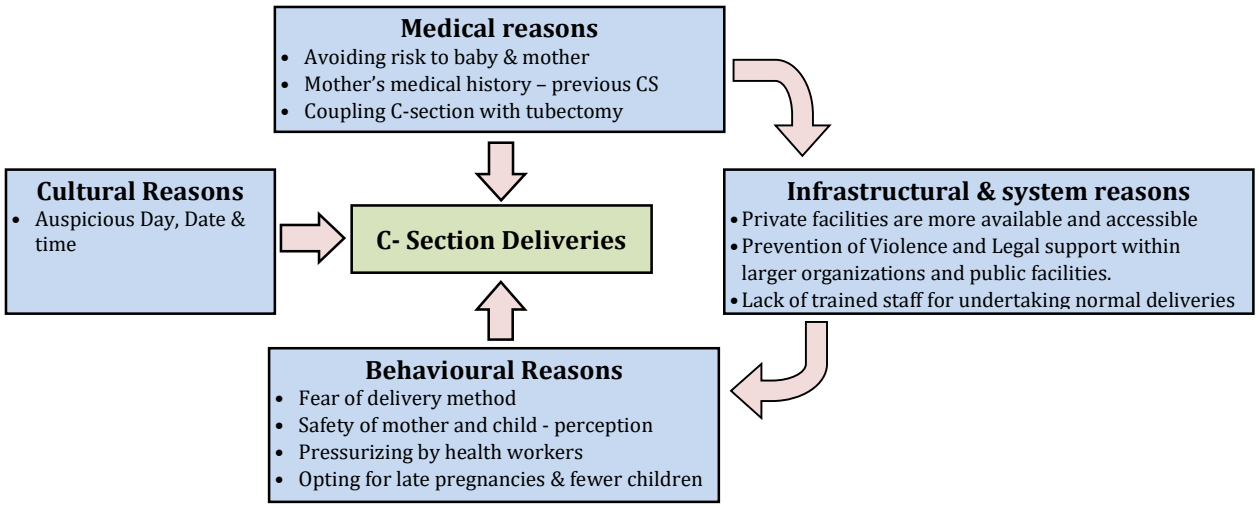

Figure 1: Reasons for C-Section Deliveries

The reasons for C-Section deliveries (Fig 1) which includes the following:

Medical Reasons

The medical reasons were the key reasons for opting towards C-section by the mothers. Specifically, avoiding the risk to mother and baby due to pregnancy complication, previous medical history, previous caesarean sections and intention to combine it with tubectomy.

Avoiding the risk to mother and baby: The deliveries which are prolonged and complicated are usually referred for a C-section to protect the mother and baby. One of the health workers reported it as follows.

"In some complicated cases, if the fetal sounds are low, c section is the only way for safe delivery. It is good for baby also. Meconium cases are dangerous and families blame us if we don't opt for sections" (A2. FGD_ANM_Place-)

Mother's Medical History: Mothers with poor nutritional status, prolonged labor and pre-existing health conditions were advised to undergo C-section by the physicians.

"Mode of delivery is planned based on risk factors, if no risk factors, we will promote deliveries in PHC. If High risk factors like if 1st is section, hypertension, short stature, any family history then we will be referring her to area hospital or district hospital". (Quote from Medical Officer)

Specifically, it was observed that C-section was a preferred advice for the mothers with a previous history of C-Section. One of the health workers reported as following

"If the first case is cesarean, then second will be C-section too." (A3. Patancheru)

Coupling C-Section with tubectomy: An interesting observation was made with respect to coupling C-Section with family planning procedure of Tubectomy. It was observed that once the desired number of children (often two) were reached, some mothers prefer to opt for C-section to simultaneously undergo Tubectomy. One of the health workers reported in following ways

"Now in these days after two children they are going to tubectomy. Only for getting tubectomy they are going for c section. At the same time delivery and tubectomy both will be finished. So, they are preferring c section." (A 4. Huzurabad)

Cultural Reasons

Several key cultural reasons and beliefs influenced the decision to undergo cesarean section. Going to the mother's house for the first delivery and intending to deliver on auspicious days (such as Deepavali, Dusshera etc) influenced the mothers and their family's decision to undergo cesarean section. Date and time of delivery also figured in the responses.

Delivering at the mother's place: In Telangana and Andhra Pradesh, it is a cultural tradition to go to mother's house for the first delivery. One of the health workers from Nalgonda district reported the following. It was also felt that having a C-Section meant that the mother was taking good care by her own parents.

"Women go to their mother's place for First delivery. There they go to private hospital where they don't try for normal delivery" (A3_SN_Nalgonda)

Birthing on the Auspicious Days: It was observed that some families preferred the Child Birth on specific days and time. One ASHA worker with years of experience working with pregnant mothers and their families reported the following.

"We also suggest them to go through normal delivery, for normal delivery baby and mother will be healthy. (But)Most of the people looking for an auspicious day. This is the main reason for c- section" (ASHA 3. Huzurabad)

Table 1: The details of the district wise Focus Group Discussions

District	Community	Area Hospital – Nurses, ANM's etc	District Hospital – same as last column	MCH Centre health care professionals	PHC – MO, ANM, ASHA	DMHO & FDHS
Hyderabad	1	1	1			
Karimnagar		1		1	3	1
Medak		1	1	2	2	
Nalgonda	2	2	1			1
Suryapet	2	2			1	1
Nirmal	3	1			2	
Warangal	2	2	1		1	
Wanaparthy	2		1		2	
Total	12	10	5	3	11	3

ANM: Auxiliary Nursing Midwifery; MO: Medical Officer; ASHA: Accredited Social Health Activist; DMHO: District Medical Officer; FDHS: Fixed Day Health Service Officer

Table 2: The details of District wise in-depth interviews

District	Primigravida	> 1 gravida
Hyderabad	10	20
Karim Nagar	9	21
Medak	14	16
Nalgonda & Suryapet	15	15
Nirmal	7	23
Wanaparthy	21	9
Warangal	15	15
Grand Total	**91**	**119**

Behavioral Reasons

Several behavioral dimensions influenced the decision to undergo C-section. An increasing preference for late pregnancies and desire for fewer children is driving the mothers and their families to adopt a safer route of delivery through C-section.

Preference for Late pregnancies: The changing preference towards late pregnancies and fewer children was observed to increase the preference for C-section to ensure the safety of the mother and child. One of the staff nurses in one of the medical centers reported the following.

> *"Many women marry at late age nowadays. Some of these women do not conceive for some time after their marriage. Some conceive after medical support. Such people take a secure side of having cesarean for the safe birth of their baby. They just think about the baby's health and don't care about the money and their own health even" (P4_SN_Huzurabad).*

Fear of the mode of Delivery: A common observation from the Focus Group Discussions includes the fear of Labor Pains. Specifically, the health workers reported that the primi (1st time mothers) mothers and their families sometimes fear the normal delivery process, and pressurize the doctors to undertake C-section.

> "*Few of them, will not be able to tolerate pains, there is fear among pregnant women of young age group and they themselves ask for c section saying that they are not able to cope up with pains*" (A1. FGD_ANM_Place-)

Family members pressurizing health workers: Moreover, it was also observed that due to the fear of complications, the family members of the mothers pressurize the doctors and healthcare staff to perform the C-Section. One the health worker reported the following

> "*We will get phone calls to do caesarean as early as possible, to avoid unbearable labour pain. Sarpanch, MPTC, ZPTC and other leaders, whoever they know they make them call us, recommending us to perform the surgery as soon as possible. They will call and force the doctors here. With no choice left, doctors perform C-Section*" (S5_SN_Medak)

Perception of safety of mother and child: Families perceive that CS are safer and most convenient way for mothers to deliver without pain, early mobilization and having access to health care professionals in facilities to ensure safety of mother and child.

> *"Many are like that. When they come for ANC checkups, they ask us for C-Section saying that their daughter can't bear the pains."* (P2_SN_Nirmal)

> *"Mainly attendants ask for section, patients are fine. Due to attendants, we have more C-sections." "They are unable to see the women suffering from labor pains"* (P1. ANM_DH_Nalgonda)

> *"Husbands directly fight with us, ask us why we don't do operation for their wife." "Why don't you do operation, who is responsible in anything bad happens to the baby inside? - they ask us"* (P3. ANM_DH_Nalgonda)

Infrastructural & system reasons

One of the major drivers for C-section deliveries in rural areas are lack of adequate infrastructure in public health facilities. Specifically, it was observed that the referral centers were not at an accessible distance or human resources were not available due to which the mothers opt for private facilities often undergoing a C-Section delivery.

Private facilities are more available and accessible: In Telangana with a greater percentage of deliveries happening in Private Hospitals. The District Medical and Health Officer in one of the study areas who oversees the healthcare delivery at the district level reported the following.

Table 3: Summary of quantitative data

Total IDI's of mothers delivered during last 6 months	Mothers (%)
Age Group (n=210)	
Below 25	175 (83.3)
Above 25	35 (16.7)
Mode of Birth (n=210)	
Normal	56 (26.7)
Cesarean Section	154 (73.3)
Parity (n =210)	
Primigravida	91 (43.3)
More than 1	119 (56.7)
Reasons for CS (n=154)	
Medical Reasons	132 (85.7)
Non-Medical Reasons	8 (5.2)
Do not know	14 (9.1)
Nativity during birth (n=210)	
In -laws	98 (46.7)
Parental	112 (53.3)
Day of birth (n=210)	
Week-day	160 (76.2)
Week-end	50 (23.8)
Time of birth (n=210)	
Day (6 am - 6 pm)	164 (78.1)
Night (6pm - 6 am)	46 (21.9)
Place of birth (n=210)	
Public	188 (89.5)
Private	22 (10.5)
Place of Public Birth (n=188)	
Area Hospital	93 (49.5)
Community Health Centre	24 (12.8)
District/MCH facility	63 (33.5)
Primary Health Centre	8 (4.2)
Funds for Birth (n=123)	
Did not require	86 (69.9)
Had own insurance	4 (3.3)
Had to loan/borrow/mortgage	33 (26.8)
KCR Kit/DBT/Reimbursement (n=201)	
Availed	105 (52.2)
Did not avail	96 (47.8)
ANC Visits attended (n=201)	
Less than 4	30 (14.9)
More than 4	171 (85.1)
Registered Pregnancy (n=210)	206 (98.09)
Institutional Deliveries (n=210)	210 (100)

"*Women go to their mother's place for First delivery. There they go to private hospital where they don't try for normal delivery" (A3_SN_Nalgonda)*

Additionally, the lack of availability of Gynecologists, Infrastructure, timing of the deliveries and distance from referral centers also contributed to delivery in Private Sector, a significant proportion of which were C-Sections.

"*In government facilities, doctors will not be available at night, only one gynecologist; sometimes doctors refer to Gandhi and Niloufer hospitals but people see the distance so they go to a private which is near*." (A3. Patancheru)

To avoid violence and legal challenges: Through the interviews of doctors and other healthcare providers it was inferred that C-sections are conducted by the doctors fearing any violence that may be caused by the family members of pregnant women in the event of any unwanted outcomes during the normal delivery process. Moreover, the tedious process of maternal death review and audit causes the doctors to encourage C-section.

"*We can't predict whether the baby has cord around neck, and if have still birth occurs, then we have legal issues*". (Quote from obstetrician).

DISCUSSION

Institutional deliveries under supervision of a trained health worker are key for reducing maternal mortality, the Cesarean section is a surgical procedure with intraoperative, post-operative and long-term health risks.[9] This study explored the reasons for C-section in Telangana, a south Indian state with a high percentage of institutional deliveries and C-section.3 From 1992 (NFHS 1) to 2020 (NFHS 5) the percentage of institutional deliveries increased from 32.8 % to 97 %, in Telangana and erstwhile Andhra Pradesh. Additionally, the percentage of C-section deliveries increased by 60.7%. Global evidence report that C-section rates are influenced by improving educational status, availability of services, patient factors, physician factors and health system factors such as increasing prominence of private players in institutional deliveries etc.[10] From the focus group discussions and in-depth interviews, medical reasons such as (Repeat cesarean, breech position, cord prolapse) avoiding risk to mother and baby are commonly cited reasons for C-section deliveries. The recent NFHS reports that over 60.7% of all the births in Telangana were conducted through CS. an alarmingly high percentage than generally accepted rates for medical reasons, indicating that other reasons as well could predominantly impact CS rates. Another medical reason for CS is the decision to couple CS with tubal ligation a permanent family planning procedure. It was observed that non-primi mothers, prefer to undergo sterilization (tubal ligation) along with the delivery after the desired number of children. This can be explained by the high prevalence of female sterilization among women of reproductive age. According to NFHS-5 around 61.9% of currently married women in Telangana aged 15-49 years had undergone female sterilization greater than Indian average of 37.9%.[11] A recent study among mother's undergoing cesarean section in Bhopal reported tubectomy as the most preferred method of contraception.[12] A similar observation found in Mumbai and Trivandrum.[13]

The study found that fear of child birth, particularly among primigravida mothers and their families contributed to choice of C-section which is perceived to be swift and less time consuming.[14] Studies also reported that clinicians practiced C-section as form a defensive medicine fearing litigations due to possible adverse outcomes of normal delivery.[15] This could also be explained with the high prevalence of work place violence experienced by doctors and health workers in the Indian settings.[16]

Table 4: Summary of reasons for facilitators of CS

Determinants and Facilitators
Personal & Family reasons
• Having a smaller family
• Having a late pregnancy and child
• The primary concern of safety of mother and child
• Inability to bear pains
• Faster processes and personalised care at private facility
• Mothers/Mothers in Law want painless births for their wards
Community reasons
• CS is considered normal by the community
• Siblings and Peers in the community have had CS
• Live Demonstration in the community
• Higher SE status and Education Level
• Status symbol to have CS in community
System reasons
• Acute Staff shortage & distribution at all care levels
• High Case Loads; Managing OPD
• Lack of training and enabling environment of health care staff
• Limited time and capacity to attend to pregnant woman in labour
• Absence of clear-cut protocols for triaging, referral and care
• Empowering local health care staff for decision making
• Managing expectations during false pains
• Fear of medico-legal issues and own safety/protection
• Specialists subjected to influence & pressure at work
Policy reasons
• Guidelines for 3rd & 4th ANC visits at higher facilities for all
• Gap in interpretation of advice leads to lost to system
• Increased registrations due to KCR kit – institutional births
Medical & Other reasons
• Previous LSCS surgeries is the biggest indication
• Tentativeness and no support facilities for VBAC
• Avoiding Consumer issues like violence and litigation

It was also observed that C-Sections were also influenced by the increasing cultural preference to deliver on an auspicious day. Grey literature from Indian context discusses on the increasing trend of "muhurat C-sections".[17,18] Evidence from other middle-income countries also highlight the impact of preference for delivering on an auspicious day.[19,20]

The study findings report that the infrastructural challenges in public sector, distance from referral centres and non-availability of specialist gynaecologists impacted decision to undergo C-section in private facilities. Districts that had low rates of CS also had distance to higher facility as the reason while those with higher rates had few or no trained birth attendant to conduct deliveries. A study from Uttar Pradesh in India reported that distance from First Referral Unit (FRU), lack of transport, unfamiliarity with the facility prompted the women to seek institutional delivery from private facilities.[21] A recent study reported that mothers delivering in private facilities have over 3 times odds of delivering through C-section.[6] The recent NFHS-5 fact sheet reports that in Telangana, the prevalence of C-Section in private hospitals was 81.5% whereas the same in public hospitals was 44.5%.[11] While studies indicate several monetary and non-monetary reasons for high prevalence of C-section in private sector.[22] recent evidence estimates that over 0.9 million unwanted C-sections were performed in private sector alone.[23] With a higher number considering the increase in C-section numbers from 2015-2020.

CONCLUSION

Increase in C-section deliveries is driven by increased institutional deliveries, higher preference for smaller families, medical, behavioural, cultural and health infrastructural and systemic reasons. While each of the dimensions reported influenced decision-making towards C-section it may be noted that the above dimensions reinforce each other. Based on the study's findings and existing quantitative evidence (such as NFHS surveys) it can be argued that non-medical reasons account for a large number of C-sections in Telangana; this is reinforced by our thematic analysis which indicates that the perceptions related to unnecessary CS were the same amongst the key stakeholders of high, medium, and low rates of CS prevalence. Based on study results it can be said that interventions should focus on counselling and behavioural change communication to encourage the mothers and their families to opt for vaginal delivery.

ACKNOWLEDGEMENT

Thanks to Dr. Meena Som, Dr. Sanjeev Upadhyaya, Dr. Ammajji C, Dr. Prakash Kodali, Vineela Kellellu University of Hyderabad – Institute of Eminence

REFERENCES

1. World Health Organization Human Reproduction Programme A. WHO Statement on caesarean section rates. Reprod Health Matters. 2015;23(45):149-50.
2. Vogel JP, Betrán AP, Vindevoghel N, Souza JP, Torloni MR, Zhang J, et al. Use of the Robson classification to assess caesarean section trends in 21 countries: a secondary analysis of two WHO multicountry surveys. Lancet Glob Health. 2015;3(5):e260-70.
3. India Fact Sheet. Mumbai: International Institute for Population Sciences; 2019-21.
4. Fact Sheets Key Indicators NFHS-5. In: welfare Mohaf, editor. key indicators. Mumbai: International Institute for population Sciences; 2019-20. p. 145.
5. Roy N, Mishra PK, Mishra VK, Chattu VK, Varandani S, Batham SK. Changing scenario of C-section delivery in India: Understanding the maternal health concern and its associated predictors. J Family Med Prim Care. 2021;10(11):4182-8.
6. Sengupta A, Sabastin Sagayam M, Reja T. Increasing trend of C-section deliveries in India: A comparative analysis between southern states and rest of India. Sex Reprod Healthc. 2021;28:100608.
7. 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 Med. 2018;15(1):e1002494.
8. Elwyn G, Frosch D, Thomson R, Joseph-Williams N, Lloyd A, Kinnersley P, et al. Shared decision making: a model for clinical practice. J Gen Intern Med. 2012;27(10):1361-7.
9. Mylonas I, Friese K. Indications for and Risks of Elective Cesarean Section. Dtsch Arztebl Int. 2015;112(29-30):489-95.
10. Barber EL, Lundsberg LS, Belanger K, Pettker CM, Funai EF, Illuzzi JL. Indications contributing to the increasing cesarean delivery rate. Obstet Gynecol. 2011;118(1):29-38.
11. State Fact Sheet - Telangana NFHS 5. Mumbai: International Institute for Population Sciences; 2020.
12. Upmanyu P, Kanhere A. Acceptance of methods of family planning in patients undergoing repeat caesarean section. International Journal of Reproduction, Contraception, Obstetrics and Gynecology. 2016;5(4):976-9.
13. Thulaseedharan JV. Contraceptive use and preferences of young married women in Kerala, India. Open Access J Contracept. 2018;9:1-10.
14. Hallgrimsdottir H, Shumka L, Althaus C, Benoit C. Fear, Risk, and the Responsible Choice: Risk Narratives and Lowering the Rate of Caesarean Sections in High-income Countries. AIMS Public Health. 2017;4(6):615-32.
15. Küçük M. Defensive medicine among obstetricians and gynaecologists in Turkey. J Obstet Gynaecol. 2018;38(2):200-5.
16. Kumari A, Kaur T, Ranjan P, Chopra S, Sarkar S, Baitha U. Workplace violence against doctors: Characteristics, risk factors, and mitigation strategies. J Postgrad Med. 2020;66(3):149-54.
17. BARIA ZF, Are you planning a mahurat C-section? Times Of India. 2010;Sect. Life Style.
18. Shanker KS. C-sections for an auspicious time of birth. The New Indian Express. 2017;Sect. cities.
19. 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. 2021;21(1):23.
20. Chu KH, Lee YH, Tai CJ, Lin YH, Huang CM, Chien LY. Caesarean delivery before 39 weeks associated with selecting an auspicious time for birth in Taiwan. Women Birth. 2015; 28(3):e52-6.
21. Bhattacharyya S, Issac A, Rajbangshi P, Srivastava A, Avan BI. "Neither we are satisfied nor they"-users and provider's perspective: a qualitative study of maternity care in secondary level public health facilities, Uttar Pradesh, India. BMC Health Serv Res. 2015;15:421.
22. Hooda S. Decoding Ayushman Bharat. Econ Political Wkly. 2020;55:107-15.
23. Surana M, Dongre A. Too much care? Private health care sector and surgical interventions during childbirth in India. Indian Institute of Management Ahmedabad. 2018:1-26.