Pregnancy and its Outcomes in a Tertiary Care Hospital of Northern India: A Retrospective Study

Abstract

Indian women's maternal health status was found to be worse than that of women in other developed nations. One of the most crucial aspects of managing and caring for mothers and children has been the promotion of maternal and child health. Safe motherhood by providing good antenatal care (ANC) is very important to reduce maternal mortality ratio and infant mortality rate and achieve millennium development goals. Therefore, the present study focused on the effect of ANC services and the current status of pregnancies in a tertiary care hospital. The present retrospective study was conducted on pregnant women of OPD and IPD in the Obstetrics and Gynecology Department of a tertiary care hospital in North India between April to October 2022. According to the current study, the number of complicated deliveries was less as compared to the number of delivered women with positive neonatal outcomes. These findings can be used to plan a health intervention programme aiming to improve maternal and health practices which can improve the status of health in pregnant women. This also highlights the importance of proper ANC care and institutional deliveries.

Keywords: Antenatal care, pregnant women, newborns Tertiary Care Hospital

1. Introduction

The World Health Organization's Safe Motherhood Initiatives, a global initiative that was started in 1987, sought to lower the number of deaths related to pregnancy and childbirth [1, 7]. The primary healthcare delivery system of a nation that strives for a healthy society is thought to be anchored by antenatal care (ANC) services. Improving maternal health is one of the eight-millennium development goals (MDGs). According to the MDGs, nations agreed to cut maternal mortality in half between 1990 and 2015. The number of maternal deaths worldwide have decreased by 47% since 1990 [6]. In India, despite numerous changes in a rapidly changing socioeconomic environment over the past 60 years, the maternal health situation has been appalling. For a long time, India had a very high maternal mortality ratio (MMR). According to a report, the national average MMR for Indian women is 212 per 100,000 live births (SRS - 2007-2009), which is extremely high when compared to

international standards like Sweden's (5), the USA's (24), Brazil's (58), and even neighbouring nations like Sri Lanka's (39) and Thailand's (48) [1]. In addition to maternal mortality, 50 million women experience acute pregnancy-related complications that could be avoided by encouraging women to give birth in a medical facility or with the help of trained birth attendants [2]. In this context, primary care physicians' duties and responsibilities have also undergone ongoing revision. To address the issue, various health worker cadres have been appointed under their direction [3]. In order to ensure the best possible outcomes for the mother and her unborn child, ANC offers care to pregnant women that monitors the course of the pregnancy and promotes birth readiness and complication readiness [4]. According to the National Family Health Survey (NFHS)-4, only 21% of pregnant women in India used full ANC services, with state-by-state usage ranging from 2.3 to 65.9%. Numerous pregnancy-related deaths can be avoided with proper medical care during pregnancy and childbirth [5,8]. Therefore, the present study focused on ANC services and the current status of pregnancy in a tertiary care hospital in a tier 2 city in India.

2. Methodology

The present retrospective study was conducted in a tertiary care hospital on pregnant women of both OPD and IPD patients in the Obstetrics and Gynaecology Department of SSB Heart and Multispecialty Hospital, Faridabad, Haryana, India,between April to October 2022 and followed up till its neonatal outcomes. The study population comprises of all pregnant women in their 3rd trimester attending the antenatal clinic. Ethical approval for conducting the study was obtained from the institutional ethics committee of the hospital and data was collected from patients' records.

3. Result

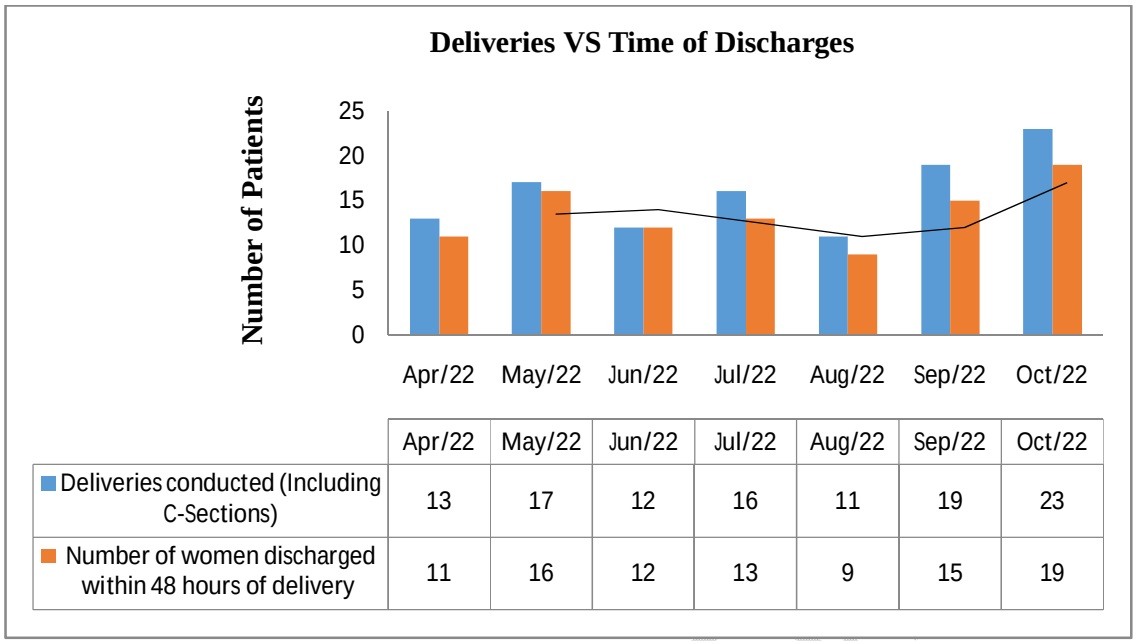
A total of 111 deliveries were conducted during the study period, and the study revealedthat the maximum number of deliveries were recorded in the month of Octoberi.e. 23,followed by 19,16,17,13,12,11 in the month of September'22,May'22,July'22,April'22, June'22 and August'22. Figure 1 shows that out of the total 111 patients who delivered, 95(85.58%) were discharged within 48 hours of delivery. 100% patients were discharged within 48 hours of delivery in the month of June'22. 26 high risk and complicated deliveries were conducted in the hospital during this time with the highest number of patients with obstetric complications like Antepartum Haemorrhage (APH), Postpartum Haemorrhage (PPH), Sepsis and Eclampsiawere seen in the month of September'22 i.e. 8 patients, out of which 5 patients

received blood transfusions due to the complicationswithin the month of September'22 (Fig.2).

The highest numbers of deliveries (23) were recorded in the month of October which include 11 vaginal deliveries and 12 C-section deliveries, out of which 5 caesareandeliveries were carried out in the night shift (8 pm to 8 am).Out of the total 70 caesarean sections conducted during the study period, only 20 were conducted in the night shift (8 pm to 8 am).

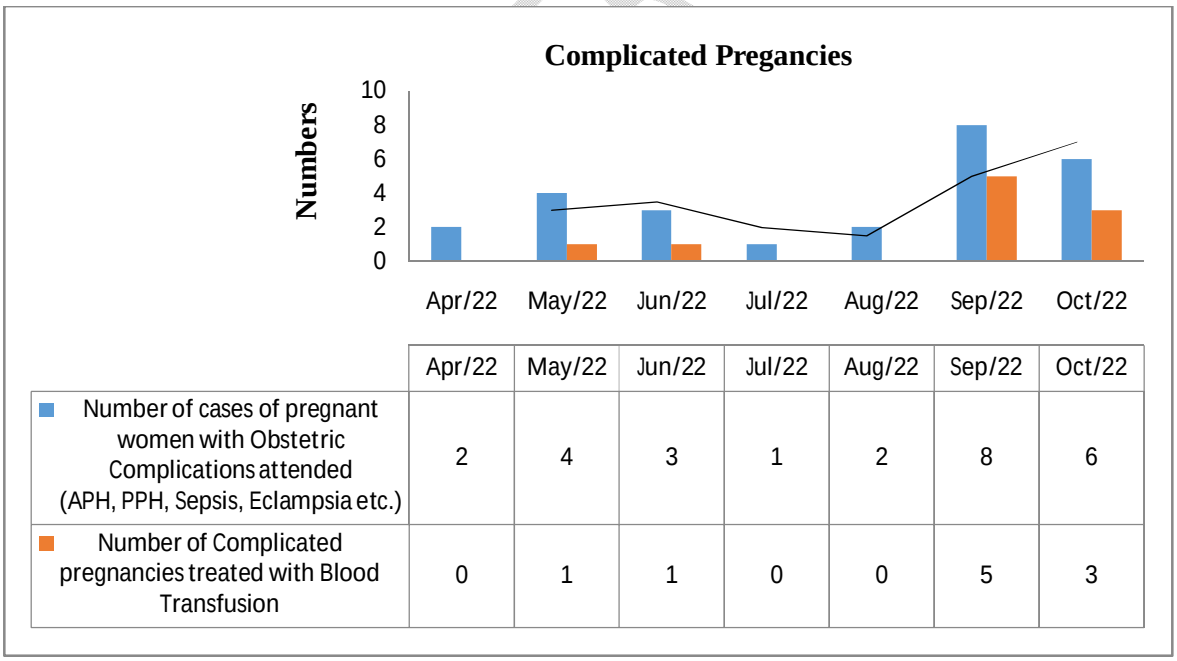
112 babies were born in this period with one being a twin birth and total pregnancy outcomes were a total of 50 female and 62 male live childbirths. Out of all the babies born in the hospital, 37(33%) babies were low birth weight i.e.less than 2.5kg and 45(40%) babies had a pre-term delivery i.e. born before 37 weeks of gestation(fig. 4,5). A total of 5childbirths with less than 2.5 kg were recorded in April, June, July and October month and6children in the month ofSeptember'22. Among the 112 babies born, only 24(21.4%) babies were breastfed within 1 hour of delivery (fig 4). A total of 37 Medical termination of pregnancies (MTP) were conducted in the hospital, out of which 35 were done within 12 weeks period of gestation. Only 2 MTP's were done in patients with more than 12 weeks of pregnancy, 1 each in month of May'22 and August'22(fig. 6).

Apart from MTPs, contraception is a very important part of healthcare of reproductive age women in India. 148 pregnancy test kits were used in the IPD and OPD of the hospital in the period of study. 92 patients who came to the hospital, opted for combined oral contraceptive pills followed by 5 women who got postpartum sterilization within 7 days of delivery or concurrently with C-section, 2 patients opted for interval IUCDinsertion and only 1 woman underwent interval laparoscopic sterilization method.(fig. 7)



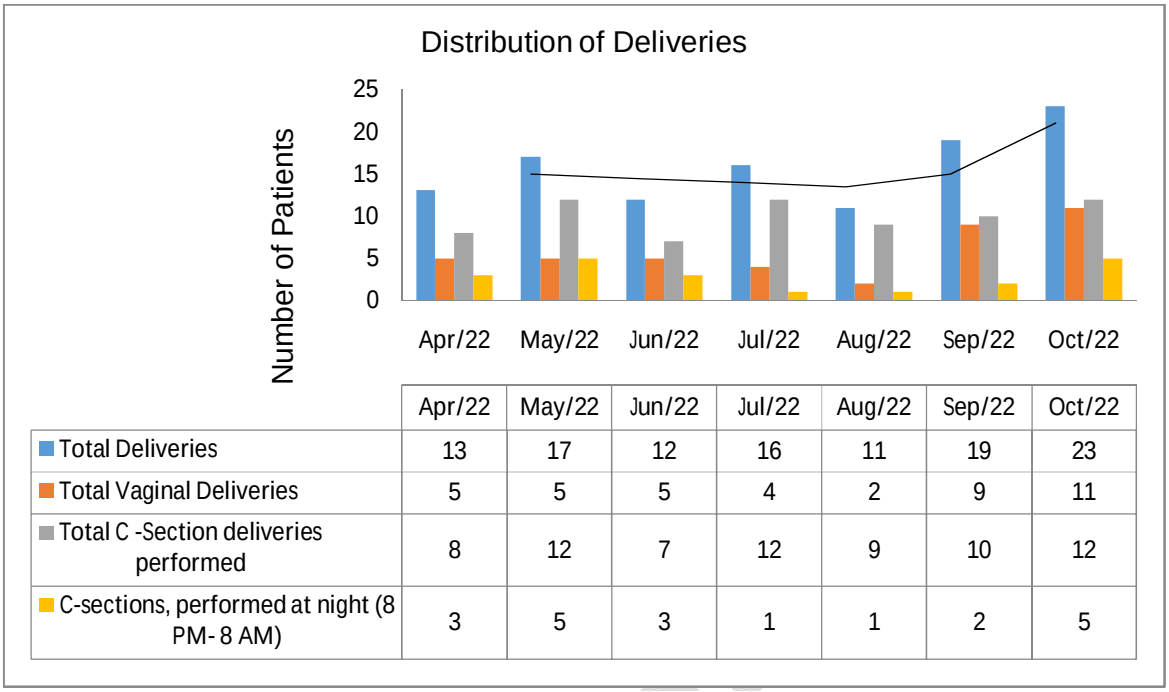
	Apr/22	May/22	Jun/22	Jul/22	Aug/22	Sep/22	Oct/22
Deliveries conducted (Including C-Sections)	13	17	12	16	11	19	23
Number of women discharged within 48 hours of delivery	11	16	12	13	9	15	19

Figure1- Shows the Delivery and discharge patternof pregnant women from April to October'22



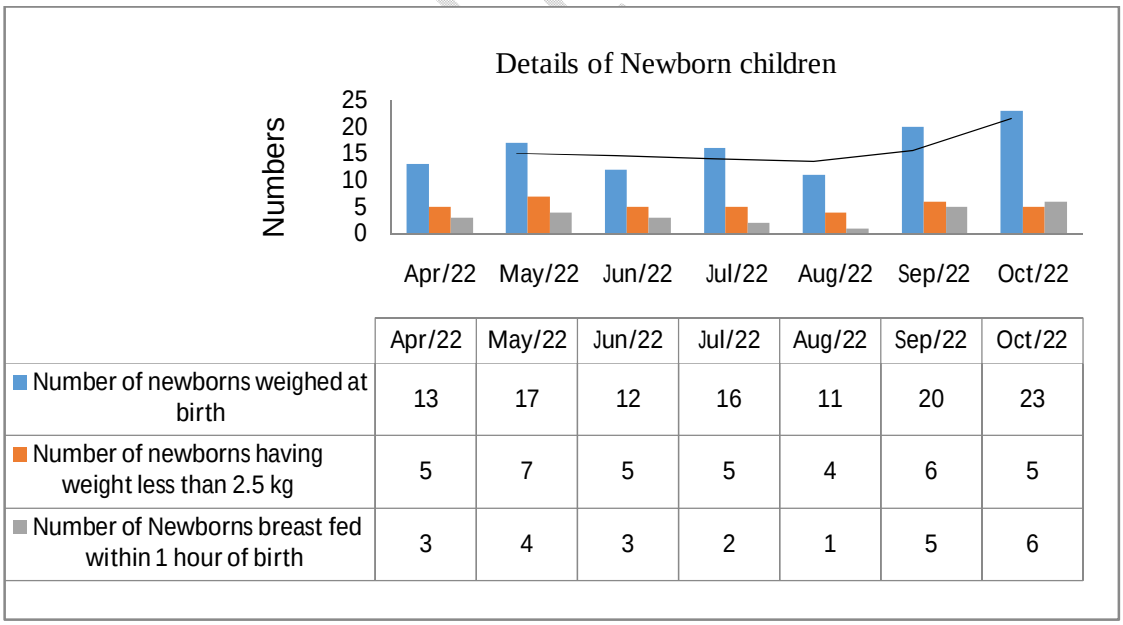
	Apr/22	May/22	Jun/22	Jul/22	Aug/22	Sep/22	Oct/22
Number of cases of pregnant women with Obstetric Complications attended (APH, PPH, Sepsis, Eclampsia etc.)	2	4	3	1	2	8	6
Number of Complicated pregnancies treated with Blood Transfusion	0	1	1	0	0	5	3

Figure 2-shows the Number of Patients with complicationsduring delivery and those which needed transfusion from April to October'22



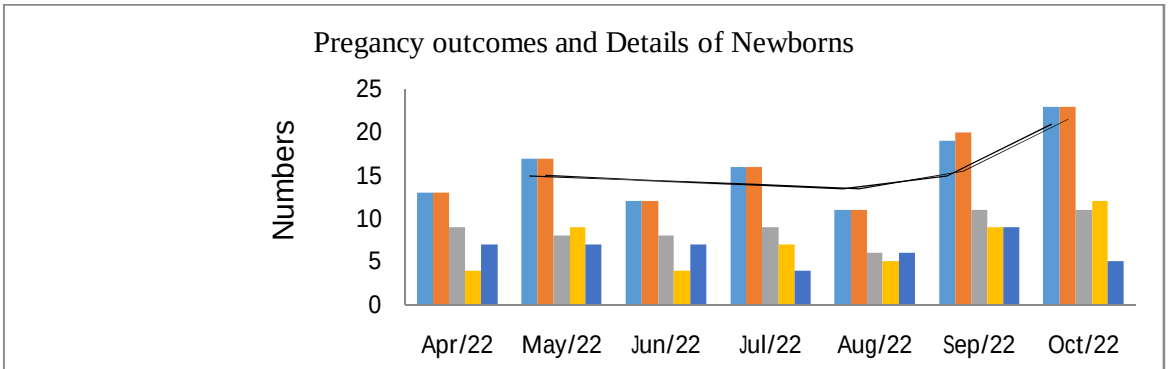
	Apr/22	May/22	Jun/22	Jul/22	Aug/22	Sep/22	Oct/22
Total Deliveries	13	17	12	16	11	19	23
Total Vaginal Deliveries	5	5	5	4	2	9	11
Total C -Section deliveries performed	8	12	7	12	9	10	12
C-sections, performed at night (8 PM- 8 AM)	3	5	3	1	1	2	5

Figure 3. shows the status of delivery during between April –October-22.



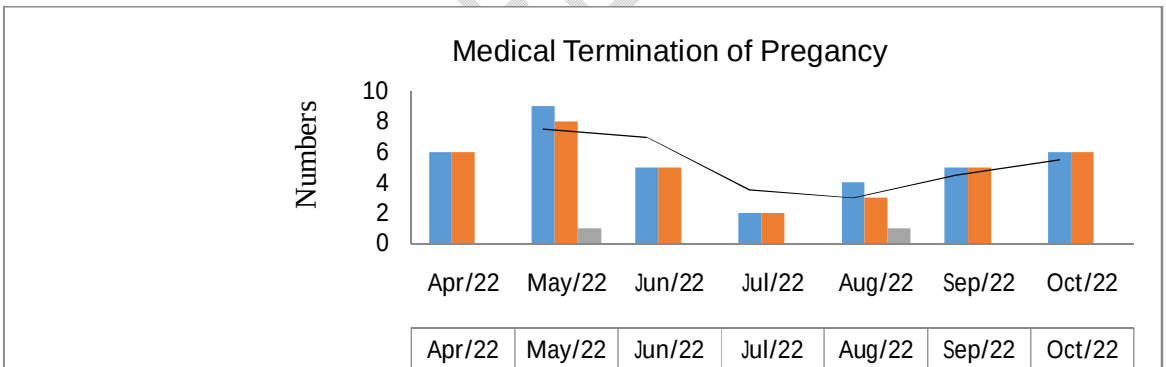
	Apr/22	May/22	Jun/22	Jul/22	Aug/22	Sep/22	Oct/22
Number of newborns weighed at birth	13	17	12	16	11	20	23
Number of newborns having weight less than 2.5 kg	5	7	5	5	4	6	5
Number of Newborns breast fed within 1 hour of birth	3	4	3	2	1	5	6

Figure 4.shows the status of newborn in the tertiary care centre between April –October-22.



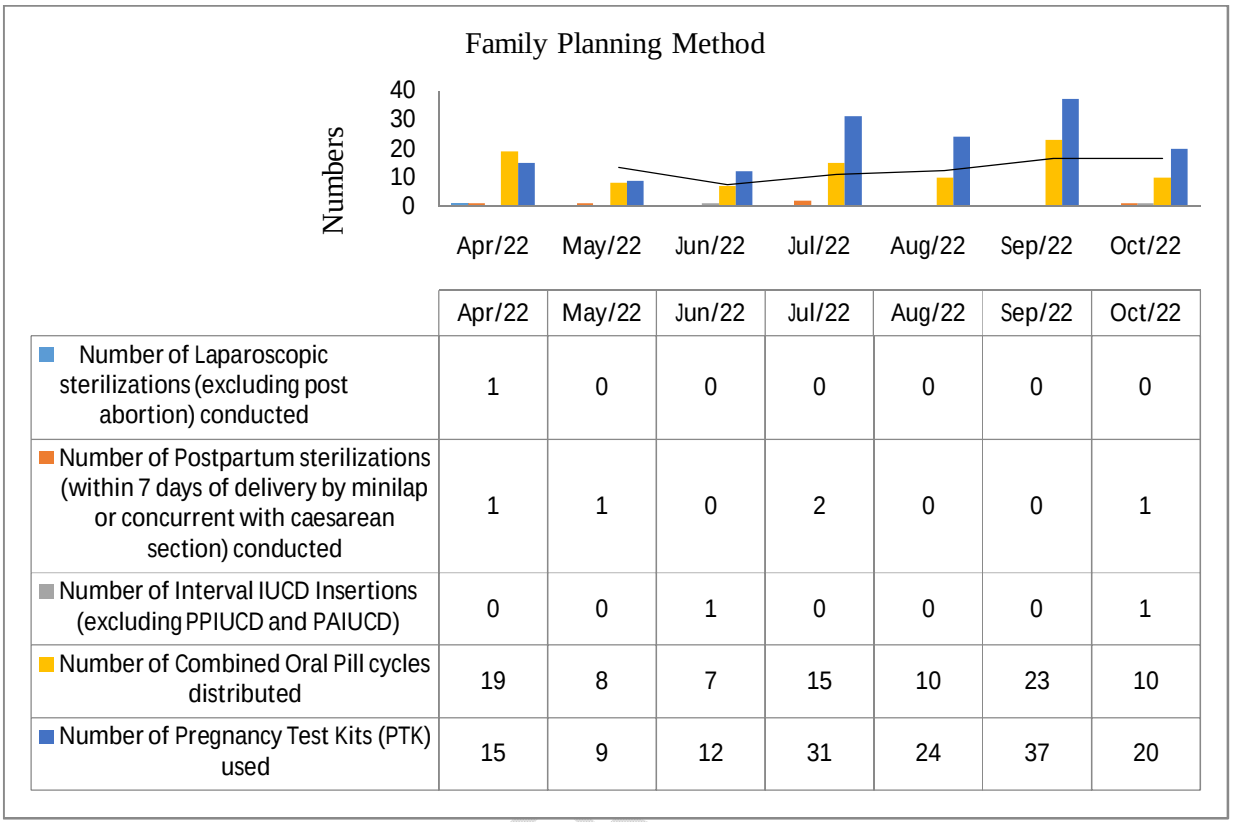
	Apr/22	May/22	Jun/22	Jul/22	Aug/22	Sep/22	Oct/22
total deliveries	13	17	12	16	11	19	23
Live Birth	13	17	12	16	11	20	23
Live Birth - Male	9	8	8	9	6	11	11
Live Birth - Female	4	9	4	7	5	9	12
Number of Pre term newborns (< 37 weeks of pregnancy)	7	7	7	4	6	9	5

Figure 5. shows the pregancy outcomes and details of newborns between April –October-22.



	Apr/22	May/22	Jun/22	Jul/22	Aug/22	Sep/22	Oct/22
Number of MTPs conducted	6	9	5	2	4	5	6
MTP up to 12 weeks of pregnancy	6	8	5	2	3	5	6
MTP more than 12 weeks of pregnancy	0	1	0	0	1	0	0

Figure 6-shows the Status of Medical Termination of Pregnancy (MTP) between April – October'22.



	Apr/22	May/22	Jun/22	Jul/22	Aug/22	Sep/22	Oct/22
Number of Laparoscopic sterilizations (excluding post abortion) conducted	1	0	0	0	0	0	0
Number of Postpartum sterilizations (within 7 days of delivery by minilap or concurrent with caesarean section) conducted	1	1	0	2	0	0	1
Number of Interval IUCD Insertions (excluding PPIUCD and PAIUCD)	0	0	1	0	0	0	1
Number of Combined Oral Pill cycles distributed	19	8	7	15	10	23	10
Number of Pregnancy Test Kits (PTK) used	15	9	12	31	24	37	20

Figure 7.shows the Family planning method between April to October-22

4. Discussion

Various Maternal healthcare indicators were evaluated to see the services in a tertiary care hospital in a tier 2 city.Most patients are discharged within 48 hours of delivery, while some cases are required to prolong hospital stay which can be due to various obstetric and non-obstetric reasons. Being a tertiary care hospital in a tier 2 city gave us insights that out of all the deliveries conducted, 23% of patients were those with obstetric complications and there was a high caesarean rate which can also be attributed to various factors like a patient preference for the specific date of delivery due to certain customs and beliefs, the low pain threshold of patients for vaginal delivery, fear of litigation in doctors, a high number of complicated patients (obstetric and non-obstetric causes) being referred for delivery from nearby areas and villages [9].The current study also showed that despite higher pre-term deliveries, less number of babies had low birth weight status. This might be because people are becoming more aware of factors affecting mother and child health. However, only 21% of the babies born could be breastfed within 1 hour of delivery as most patients coming to a private hospital are resting in the first 1 hour and are not willing to start breastfeeding despite

encouragement and counselling. The study also revealed the most common choice of contraception being Oral contraceptives.

This study has a few limitations, but not many. The study's conclusions can only be generalized to pregnant women undergoing delivery in a private institute. Due to various cultural practices, norms, and beliefs, the results of the study may vary depending on where it is conducted. The sample size was also small and thus larger-scale studies are required to analyse the patterns in different areas and institutions of India.

5. Conclusion

In the end, this study came to the conclusion that the results will be useful in the planning and implementation of new health initiatives that enhance maternal health procedures. Specific intervention programs need to be planned and conducted to improve their maternal health practices and eventually improve their health status.

9. Reference

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