

Natural Birth V/S C-Sections: The Safer and Better Way Forward

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Abstract- With modernization and technological advancements, birth trends have changed significantly not only in India but across the globe. This paper was written to understand the perspective of various mothers on Natural Births and Caesarean Sections. The study sample comprised 79 mothers, aged 30-45, drawn from the cities of Gurgaon, Haryana, and Jaipur, Rajasthan. Qualitative Analysis revealed that the rate of C-Sections has risen drastically in modern times as a result of the modernization of technology, availability of resources, and rampant corruption in the healthcare system of India. Pre-birth complications also played a significant role in this spike. More C-Sections as well as forceps deliveries were associated with post-birth complications in contrast to those caused by Natural Births. Overall Natural Births are considered to be safer and better than C-Sections.

Keywords: Natural Births, Caesarean Sections, Complications, Trends, Modernization, Technology

Introduction

Natural Birth also known as Vaginal Birth is the phenomenon of giving birth to a baby via the vagina without any surgical or artificial medical interventions as well as no medicines.

Larissa Hirsch (2022) in her Paper on “Natural Childbirth” concluded that there are multiple ways to give Natural childbirth, however, two of the most common approaches are:

- **The Lamaze Technique:** In which medicines (including pain relievers like Epidurals) and other techniques to relieve birth pain and make it easier, may be used according to the preference of the mother.
- **The Bradley Method:** In which medicines are avoided as far as possible until they are absolutely required. This technique focuses on providing good nutrition and exercise during pregnancy as well as deep-breathing exercises to cope with labour. Its classes also prepare the parents for facing unexpected complications, in which case, another method of birth- the Caesarean Section cannot be avoided.

Other methods used in Natural Birth include Hypno-Births, Water Births, Yoga, Meditation and more.

Coming on to the other, more popular method of giving birth-**The Caesarean Section or what is commonly known as the C-Section**. It is the surgical method of giving birth to the foetus via an open abdomen incision (laparotomy) followed by an incision in the uterus (hysterotomy) (Sharon Sung, 2022). It involves more artificial methods, medicines and other interventions in contrast to the less disrupting Natural Birth.

Both Types of births carry their own sets of advantages and disadvantages. While C-Sections increase the maternal and foetal mortality rate significantly, they also give rise to various complications such as Abnormal Placentation, Haemorrhages among others.

Natural Births, on the other hand, are less intrusive and provide better long-term health for both the mother and the baby, and some studies even indicate that natural birth provides better cognitive skills and psychological development. It is the inevitable physiological process of human reproduction (Huang et al., 2004). However, it provides lower mortality rates than C-Sections as they are not successful when it comes to medical emergencies such as Placenta Accreta, Haemorrhages etc. Moreover, they can be quite risky if a woman doesn't follow her doctor's recommendations or refuses medical intervention if needed (Larissa Hirsch, 2022). Its common complications include Postpartum Haemorrhage and Uterine Rupture before the onset of labour-usually in the early stages of pregnancy.

All in all, childbirth is a uniquely painful and difficult experience for humans. However, with modernization and technological advancement, maternal and foetal mortality rates have increased by and large as well as giving birth has become much easier.

As stated by the *Birth Injury Help Center* (2023) in their paper on “The History of Childbirth”, when early humans evolved to walk on two legs instead of fours, there was a decrease in our pelvic sizes. Moreover, as we developed more and more, our brains grew larger and larger in size. It is due to this ratio of head to pelvis size that natural births in humans are so painful as compared to those in other animals.

Another hypothesis is that childbirth became more painful when humans began farming. As they now started to get a carbohydrate-rich diet, farmers grew to be shorter and fatter as compared to the hunter-gathers, whose diets were more nutritious. In other words, women then had even smaller pelvises and as the babies became fatter in the womb, vaginal birth became increasingly painful and difficult.

As the centuries passed, the concept of Midwifery arrived. Midwifery is a profession with a long history that has progressed alongside the evolution of mankind. Women have been 'with women' during the most intimate and significant events of their lives. In ancient India, care of women and the practice of midwifery was totally in the hands of indigenous village 'dais'.

The invention of forceps followed the concept of Midwifery in the eighteenth century. Since males could use forceps, they claimed that they were superior to female midwives. At that time, women were prohibited from performing medical procedures, let alone from using forceps. While some wealthy women started using male midwives, the majority of mothers still went the traditional route.

Anaesthesia was more understood by the middle to end of the nineteenth century. In order to relieve injured patients' agony, doctors learnt how to administer drugs, which was especially useful during surgery. For instance, Queen Victoria requested chloroform when giving birth. Medical professionals were quick to adapt anaesthesia for other purposes, but pain management during pregnancy was initially frowned upon.

During the same time period, it was discovered that pathogens are responsible for the spread of disease and infection. Surgery-related mortality have been significantly decreased thanks to the development of antiseptics and hygienic practices by doctors. This allowed women to have C-Sections without having to worry about dying from infection later on. Formerly, C-Sections were only performed when the mother's survival was not anticipated. Before the development of germ theory and antiseptics, doctors were much more responsible for the deaths of newborns and mothers than midwives because they neglected to wash their hands between various medical procedures, hence transferring illnesses from sick patients to mothers and infants.

By the 1950s, 88% percent of births occurred in a hospital with a physician. Women were treated by nurses and doctors and laid horizontally during birth instead of standing or kneeling

The development of new reproductive technologies and the fine-tuning of obstetrics have changed in recent decades. Women's suffrage has become more prominent in recent decades. Women entered the medical field in large numbers throughout the 20th century.

Up to this point, the process of giving birth has not been perfected. In certain areas where healthcare is not easily accessible, the mortality rate for both mothers and infants remains high. Despite advancements made over the past few centuries, complications still arise during childbirth, which can result in injuries to mothers and disabilities in babies. However, it is worth noting that we have made significant progress in this field compared to the previous 200,000 years of human existence on Earth.

This research paper, hence, explains in detail the contrast and benefits of caesarean sections and natural births.

Procedure

In this paper, a mixed methodology using both Quantitative and Qualitative analysis is used. A total of 79 participants were part of the study in order to achieve the necessary results to prove the hypothesis - whether natural births are safer than C-Sections. A mixed methodology provides vast data that a singular type of methodology would not be able to provide. Hence, a mixed methodology has been used in this paper for data analysis and for providing richer content. The type of analysis method used is Thematic Analysis; to support the data, percentages and averages were also used.

Results

The results were taken out via Thematic and Quantitative Analysis. There were 6 themes and 10 sub-themes respectively that were derived from the interviews of 6 people, questions included detailed responses about the complications faced by participants pre and post-birth as well as their opinions on the modernization of birth trends. Following the interviews, a quantitative analysis was done on 73 people with 61.6% of participants who believed that natural births are better than C-Sections. 58.9% of participants believed that C-Sections are necessary procedures and that the number of maternal and foetal deaths has not increased with the increase in the rate of C-Sections. While 43.8 % of participants believed that C-Sections are being unnecessarily glamorised, 97.3% believed that C-Sections should not be removed altogether and 43.8% believed that they should not be regulated by government provisions.

Discussion

The aim of this paper is to determine whether Natural births are better or rather safer than C-Sections. Quantitative and Qualitative analysis was done and it was found that the majority of people believed natural births to be better and safer C-Sections, although they still believed that C-Sections are necessary medical procedures that help in preserving maternal and foetal lives. The rate of C-Sections has drastically increased, especially in the 21st century, leading to a decrease in the rate of natural births.

Various themes were highlighted during the interviews. First of all, the Pre-birth Complications. Pre-birth complications are one of the major reasons why C-Sections have to be carried out instead of natural births. They are one of the scenarios where C-Sections are highly advantageous as they aid in preserving maternal and foetal lives. Two common pre-birth complications include Uterine Retroversion and a Breech Baby. There is a greater incidence of uterine bleeding and abortions in patients having Uterine Retroversion as compared to those who have had a natural birth. (*British Medical Journal, 1976*). When you have a breech baby, it is recommended to have a C-section rather than a natural birth as natural delivery can cause severe complications (*Cleveland Clinic, 2021*). A vaginal breech birth can cause severe complications-It can dislocate the baby's arms or legs. It can also lead to umbilical cord issues, such as it being flattened or twisted while giving birth leading to brain damage due to oxygen deficiency.

When speaking about post-birth complications, it can affect two things- the health of the Baby and that of the Mother. *According to Panji Mohammad (2019)* in his paper on "Relationship between Delivery Type and Jaundice Severity among Newborns Referred to Hospital", babies may develop complications such as Jaundice. Post-birth complications in mothers include Boils, Umbilical Hernia, Tender Stitches, Uterine Prolapse, Pre-diabetes, Weight-related issues, and more. Though rare, there are cases in which boils have occurred along the scar in the lower abdomen and along the length of the inner thighs in mothers post a caesarean section as a result of a Staphylococcus aureus bacteria invasion (*Valinda Riggins Nwadike, MD, MPH, 2019*). Though Umbilical hernia after a C-Section is a rare phenomenon, you can still be a victim of it. It can result in a Hematoma, Abscess, Uterine rupture, Abdominal wall endometriosis, wound infection, etc. (*Sahyadri Hospitals Blogs*) *According to the Healthline (2020)* in their blog on "Signs That Your C-Section Incision Is Reopening and Needs Medical Attention", an internal C-Section opening or rupture is rare, but much more serious. In very rare cases, the uterus might need to be removed if it's very damaged or infected.

Forceps and Natural Delivery are associated significantly more with POP (Pelvic Organ Prolapse) and Pelvic floor Muscle Trauma as compared to that due to the c-section. Uterine prolapse occurs when pelvic floor muscles and ligaments stretch and weaken until they no longer provide enough support for the uterus. As a result, the uterus slips down into or protrudes out of the vagina. (*Volløyhaug, 2015*)

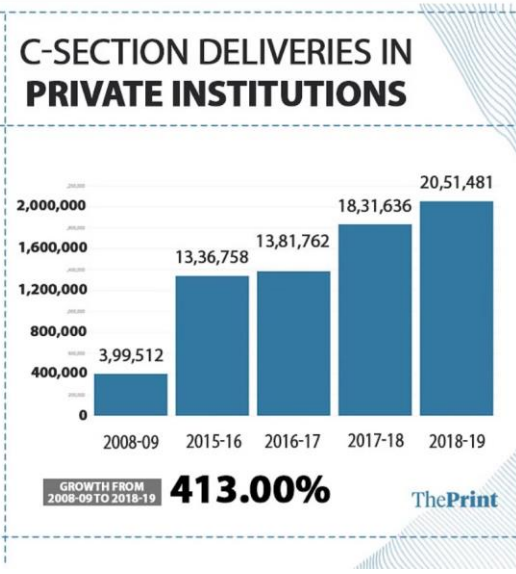
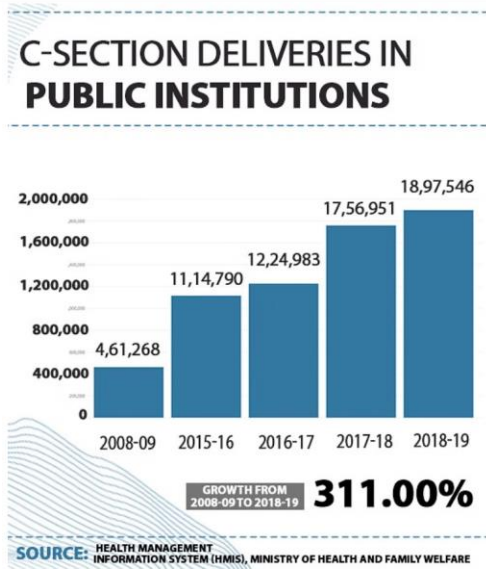
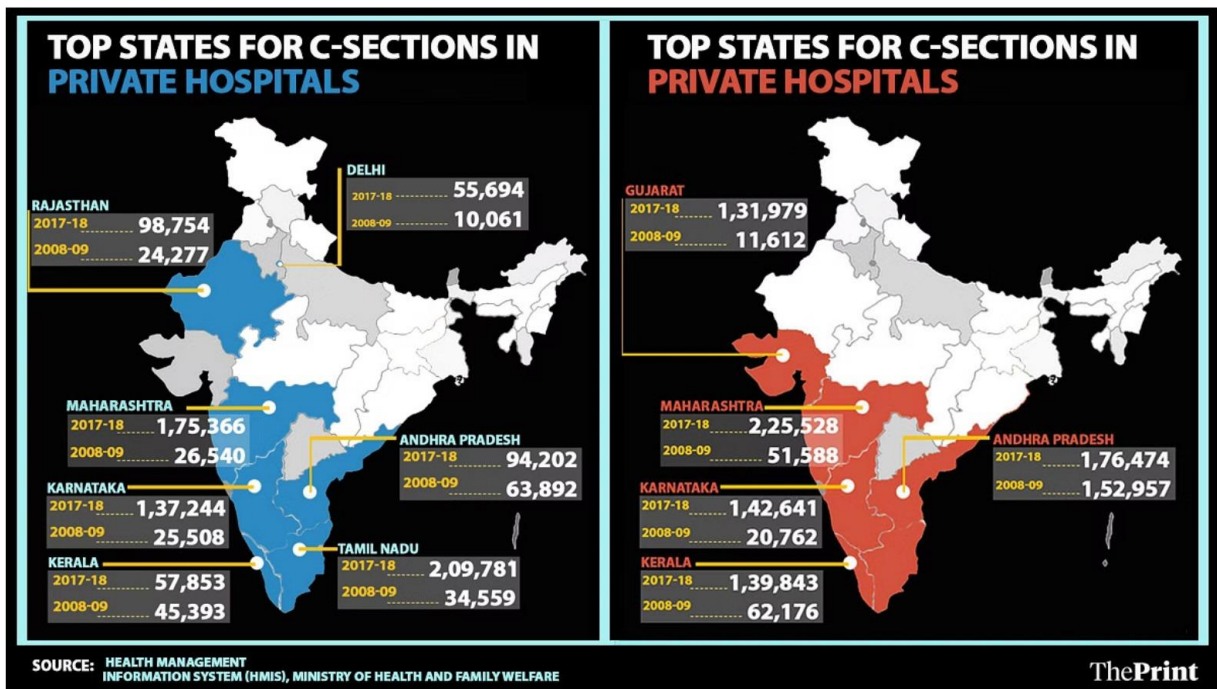
According to K E Remsberg (1999) in her paper on "Diabetes in pregnancy and cesarean delivery", C-Sections are associated with an increased risk of pre-diabetes and gestational diabetes, independent of the effect of birth weight.

Since the recovery period of a C-Section is longer than that of natural delivery, it is recommended to go longer before exercising after a C-Section vs natural birth, hence, it could be the reason why it is a little more difficult to lose weight after a C-Section (*Liesel Teen*).

Another important theme brought out was that of Corruption. These days corruption is dominant, especially in the private sector. Various participants highlighted this matter as one of the reasons for the drastic increase in the rate of C-Sections in India. In India, there has been an increase of over 300% in C-section deliveries at public hospitals, and 400% in private hospitals in the last decade. *According to the health economist Indranil Mukhopadhyay, who is an assistant professor at O.P. Jindal University*, "C-section is a supplier-induced demand driven by monetary incentives. In this case, the supplier is a hospital that can sell the product to a patient with limited information. Due to the unregulated market and no clear protocols, India is facing an epidemic of C-Sections." (*Himani Chandna, 2019*)

"There is higher compensation for C-Sections and much convenience in conducting the surgery, whereas for normal deliveries there is hardly any additional financial incentive. For instance, on average, 55% of C-Sections take place in private hospitals under the insurance schemes whereas 17% of C-Sections are undertaken in public hospitals.", said *Mukhopadhyay*.

An interesting article published in *The Print* delineates the rise of C-Sections across different states. Since 2008, there has been a 311% and 413% rise in C-Sections in public and private facilities, respectively. This data clearly indicates the rise of C-Sections and with little to no regulation on the procedure, they are bound to rise.

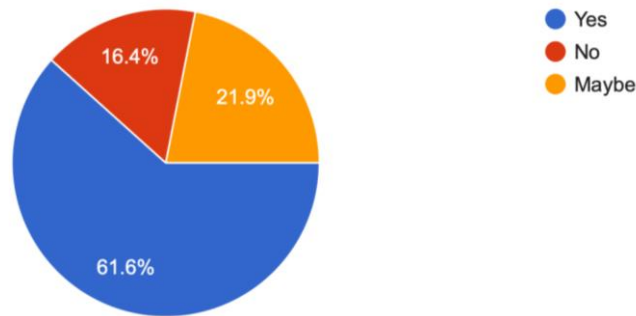


There has been a huge shift in the trends of births from the olden times to the modern times. With Modernization and Technology, various methods are available for an easy and efficient way to give birth- C Sections, natural births which can be in the form of hypno-births, water births, yoga meditation, the Lamaze technique, the Bradley method etc. Even antenatal classes are available these days. *The National Institute for Health and Care Excellence (NICE) (2021) in their paper on "Antenatal Classes"* concluded that though Antenatal classes prepare not only the mother but also the father for giving birth, yet are not available to all sections of society, especially in India where the majority of the population is poverty-stricken. Antenatal classes generally bring out favourable outcomes, especially during labour.

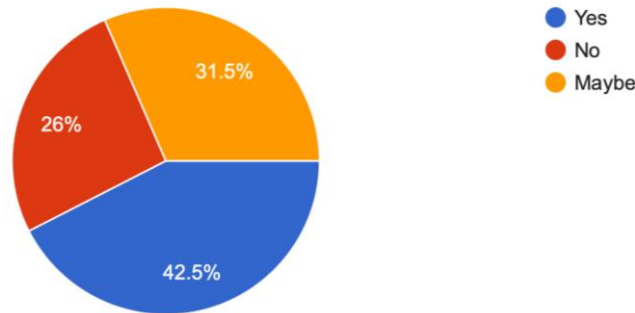
Despite all these advancements, we have progressed towards fewer natural births and more C-Sections. It could be due to our changing lifestyles- eating and working habits- as well as due to misconceptions regarding natural births. There are various reasons for the rising rate of C-Sections as stated earlier in this paper.

Finally but a very significant theme is that of Forceps Deliveries. These were prevalent in the eighteenth century when forceps were first discovered. However, they continue to be used in the 21st century despite the existence of various alternatives. Forceps deliveries can be very dangerous for both the mother and the baby. "Forceps deliveries have been associated with a variety of ocular complications, including retinal haemorrhage, lid lacerations, hyphema, and other corneal injuries" (*American Journal of Ophthalmology, 2000*). *The Cerebral Palsy Guide (2023) in their paper on "Forceps delivery complications"* concluded that "If forceps are improperly used, they can cause brain damage in the baby (which can lead to Cerebral Palsy), Erb's palsy, Rectal/Vaginal tears in the mother, Seizures, and Skull fractures in the baby."

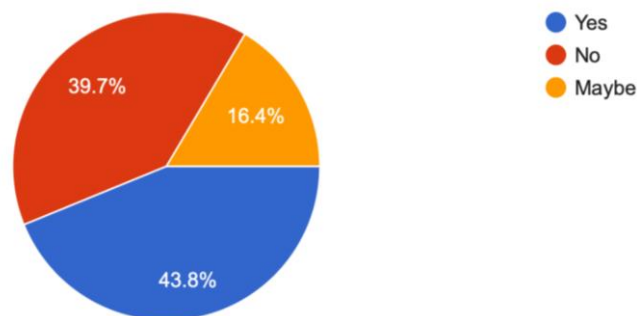
A quantitative survey was also conducted for a comparative analysis of C-section v/s Natural Births. The participants were asked whether they preferred C-Sections or natural births in order to statistically prove the aim. 61.6% of participants believed that natural births are better than C-Sections.



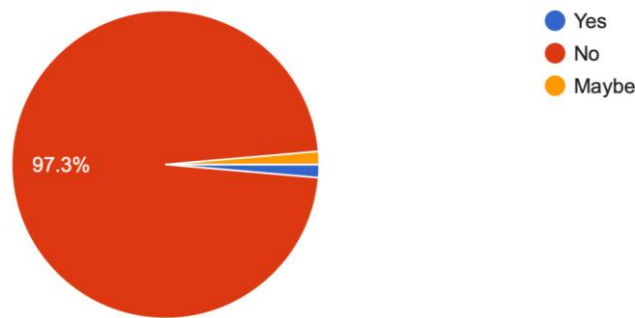
They were further questioned about the safety of both types of births and 42.5% believed that natural births are safer than C-Sections. This coincides with the fact that multiple post-birth complications can occur after C-Sections as compared to natural deliveries as stated earlier in the paper.



The participants were also asked whether C-Sections were unnecessarily being glamorised and 43.8% participants agreed. As discussed earlier during the theme of corruption and changing lifestyles, sometimes C-Sections are not required and are still carried out which is a major reason for the rise in the rate of C-Sections.



However, when they were asked whether C-Sections should be removed, 97.3% disagreed. This coincides with the theme of pre-birth complications, which proves that C-Sections are necessary medical procedures when it comes to medical emergencies. Hence, they help in saving maternal and foetal lives.



While collecting data and analysing it, something completely unexpected was found-C-Sections could be a major reason for development of Prediabetes and Diabetes. *Mark O. Goodarzi, MD, PhD, director of Endocrinology and the Endocrine Genetics Laboratory at Cedars-Sinai, in his paper on “Cesarean Delivery May Contribute to Diabetes Risk in Adulthood” (2022)*, those people born via a C-Section had a 58% increased risk of developing pre-diabetes or diabetes as compared to those who were birthed via a natural delivery. Groups born via C-Sections also reported a higher body mass index (BMI), elevated fasting blood sugar levels and decreased insulin sensitivity. Previous studies indicate that babies born via C-Section, from the mother's abdominal wall, have a different microbiome composition than those born via the birth canal.

There are a few limitations to this research paper- The first limitation, is the data size should have been bigger and women belonging to different socio-economic sections of the society could have given a more holistic understanding of the topic. The other limitation is the dearth of data on birth trends in India versus other developing and developed nations, with the modernization of technology and the availability of different doctors from across the world, there are significant differences in how mothers are treated in different countries yet little to no comparative data exists for the same.

Conclusion

This paper was written to determine whether Natural births are better or rather safer than C-Sections. It was found that there has been a steep increase in the rate of C-Sections in the current times due to modernisation of technology, availability of resources, and rampant corruption in the healthcare system of India. C-Sections are necessary procedures when it comes to medical emergencies occurring at the time of birth or as a result of pre-birth complications; in that point of view, they are unavoidable and quite advantageous as they help in saving the lives of thousands of mothers and their babies. However, at the same time, they can lead to various complications for both mothers and their babies. In contrast, natural births are less intrusive and, according to the statistics, it leads to fewer complications post-birth in both the babies and mothers. Hence, this proves that Natural Births are safer than Caesarean sections.

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REFERENCES:

- Berhan Y, Urgie T. A literature review of placenta accreta spectrum disorder: the place of expectant management in Ethiopian setup. *Ethiopian journal of health sciences*. 2020 March 1;30(2).
- Birth Injury Help Center. The History of Childbirth. www.birthinjuryhelpcenter.org. 2022. Available from: <https://www.birthinjuryhelpcenter.org/childbirth-history.html>
- Clinic C. Positions Of Baby In Womb [Internet]. Cleveland Clinic. 2014. Available from: <https://my.clevelandclinic.org/health/articles/9677-fetal-positions-for-birth>
- Chandna H. Caesarean deliveries have become an “epidemic” in India — record 300% jump in last decade [Internet]. *ThePrint*. 2019. Available from: <https://theprint.in/health/caesarean-deliveries-have-become-an-epidemic-in-india-record-300-jump-in-last-decade/334291/>
- Cerebral Palsy Guide. Birth Injuries From Forceps Delivery Complications [Internet]. *Cerebral Palsy Guide*. 2023. Available from: <https://www.cerebralpalsyguide.com/birth-injury/forceps-delivery-complications/>
- Estafanous MF, Seeley M, Traboulsi EI. Choroidal rupture associated with forceps delivery. *American journal of ophthalmology*. 2000 Jun 1;129(6):819-20.
- Goodarzi MO. Cesarean Delivery May Contribute to Diabetes Risk in Adulthood [Internet]. *Cedars Sinai*. 2022 [cited 2023 Apr 17]. Available from: <https://www.cedars-sinai.org/newsroom/cesarean-delivery-may-contribute-to-diabetes-risk-in-adulthood/>
- Healthline. What Do You Do If Your C-Section Incision Is Opening? [Internet]. *Healthline*. 2020. Available from: <https://www.healthline.com/health/pregnancy/c-section-incision-opening>

9. Hirsch L. Natural Childbirth (for Parents) - Nemours KidsHealth [Internet]. Nemours KidsHealth. 2016 [cited 2023 Apr 17]. Available from: <https://uat.kidshealth.org/en/parents/natural-childbirth.html>
10. Chen H, Tan D. Cesarean Section or Natural Childbirth? Cesarean Birth May Damage Your Health. *Frontiers in Psychology*. 2019 Feb 21;10.
11. Nwadike VR. Post-cesarean wound infection: Causes and treatment [Internet]. *MedicalNewsToday*. 2019. Available from: <https://www.medicalnewstoday.com/articles/324505>
12. Panji M, Varghaiyan Y, Sheikhalishahi ZS, Peyvasteh S, Seyedhashemi E, Zakeri M, Pooyanfar F, Barmaki H. Relationship between delivery type and jaundice severity among newborns referred to Hospital.
13. Remsberg KE, McKeown RE, McFarland KF, Irwin LS. Diabetes in pregnancy and cesarean delivery. *Diabetes Care*. 1999 Sep 1;22(9):1561–7.
14. Hospital S. Umbilical Hernia After C Section (Cesarean Delivery) [Internet]. Sahyadri Hospital. 2021 [cited 2023 Apr 17]. Available from: <https://sahyadrihospital.com/blog/umbilical-hernia-after-c-section/>
15. Sung S, Mahdy H. Cesarean section. *InStatPearls* [Internet] 2022 Apr 21. StatPearls Publishing.
16. Teen L. C-Section vs. Natural Birth: Which is the Better Option? [Internet]. *Mommy Labor Nurse*. 2019 [cited 2023 Apr 17]. Available from: <https://mommylabornurse.com/c-section-vs-natural-birth/>
17. UK NG. Antenatal classes.
18. Volløyhaug I, Mørkved S, Salvesen Ø, Salvesen KÅ. Pelvic organ prolapse and incontinence 15–23 years after first delivery: a cross-sectional study. *BJOG: An International Journal of Obstetrics & Gynaecology*. 2015 Jun;122(7):964-71.
19. Weekes AR, Atlay RD, Brown VA, Jordan EC, Murray SM. The retroverted gravid uterus and its effect on the outcome of pregnancy. *Br Med J*. 1976 Mar 13;1(6010):622-4.