



Changing Trends in Childbirth: A Review on the Rising Preference for Caesarean Section over Normal Vaginal Delivery

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Abstract : The rising global prevalence of Caesarean Section (C-section) deliveries has transformed childbirth practices and ignited concern over their growing normalization as an alternative to natural vaginal birth. While the World Health Organization (WHO) recommends an optimal rate of 10–15%, global data show a steady increase—from 16 million cesarean births in 2000 to nearly 30 million by 2015. This trend is evident across both developed and developing nations, with rates exceeding 50% in countries like Brazil and China. In India, the National Family Health Survey (NFHS-4) reported C-section rates of 23.6%–40.1% in southern states, with private hospitals showing markedly higher figures than public ones. Contributing factors include previous C-sections, fetal distress, and prolonged labor, as well as non-clinical influences such as maternal preference, physician convenience, and institutional profit motives.

Although often life-saving, unnecessary C-sections pose significant maternal and neonatal risks. Compared to vaginal delivery, cesarean births are associated with delayed lactation, altered neonatal gut microbiota, increased susceptibility to respiratory and allergic disorders, and higher risks of obesity, type I diabetes, and early childhood malnutrition. Maternal complications include hemorrhage, infection, prolonged recovery, and psychological distress. Elective cesareans, especially those performed without medical indication, further elevate neonatal morbidity and mortality.

From a Unani perspective, emphasis is placed on *Wiladat Tabi'iyya* (natural childbirth) through dietary, physical, and lifestyle regimens that facilitate smooth labour and prevent dystocia. Classical Unani texts recommend *Mullayin* (laxative) and *Muzliq* (lubricating) foods, regular oil massage (*Tamreekh*), mild exercise, and maintaining calm surroundings during labour.

Index Terms: *Caesarean section, vaginal delivery, maternal health, neonatal outcomes, Unani medicine, natural childbirth, global trends.*

1. INTRODUCTION

Background

The increasing prevalence of Caesarean Section (C-section) deliveries has sparked an important debate—whether Lower Segment Caesarean Section (LSCS) can still be considered a “normal” mode of childbirth in the modern era. In the United States, the rate of cesarean births has surged by 48% since 1996, reaching 31.8% in 2007. A similar pattern is observed globally, with countries such as China reporting rates close to 50%, and private clinics in Brazil recording as high as 80%.^[1]

Global Scenario

Globally, C-section rates have risen sharply, influenced by diverse socio-economic, cultural, and healthcare factors. The trend is particularly pronounced in Asian nations. For instance, Ghana witnessed an increase from 3% to 23% between 2003 and 2014, Iran records around 40%, China 34.9%, and Brazil 56%, with private-sector figures reaching nearly 90%. In comparison, India's rate stands at 17.2%, which is relatively lower than that of Brazil or China; however, the steady upward trajectory remains concerning. Limited maternal healthcare access and utilization continue to be major factors contributing to poor maternal and neonatal outcomes.^[3]

Rising Global Trends

The World Health Organization (WHO) in 1985 stated that C-section rates above 10–15% are not medically justified. Despite this, the global prevalence of cesarean births has continued to climb over the past three decades, across both developed and developing regions. Data from 169 countries, representing 98.4% of worldwide births, show that the number of cesarean deliveries nearly doubled from 16 million in 2000 to 29.7 million in 2015. While rates around 15% are considered optimal for maternal and neonatal safety, excessive rates often signify the over-medicalization of childbirth—driven by non-evidence-based practices, economic incentives, or maternal requests. Globally, rates vary widely, from as low as 0.6% in South Sudan to as high as 58.9% in the Dominican Republic.^[8]

Indian Scenario

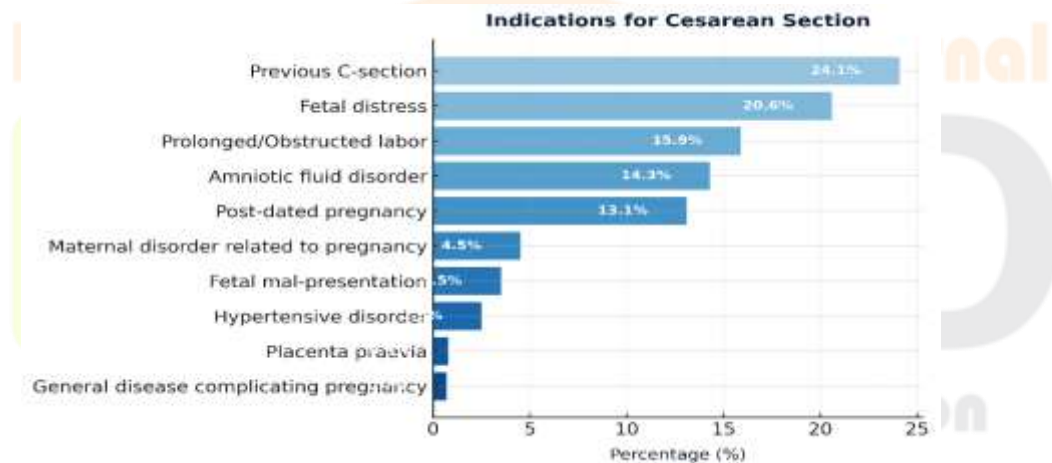
In India, a distinct pattern has emerged, with an increasing shift toward private healthcare institutions. The District Level Household Survey (DLHS-4, 2011) revealed that 13.7% of deliveries in public hospitals and 37.9% in private hospitals were conducted via C-section. Similarly, National Family Health Survey (NFHS) data show a decline in public sector caesareans—from 15.2% to 11.9%—between 2005–06 and 2015–16, while private hospital rates surged from 25% to nearly 40% over the same period. Despite WHO recommendations, certain southern Indian states continue to surpass the suggested threshold, with C-section rates ranging from 23.6% in Karnataka to 40.1% in Andhra Pradesh (NFHS-4, 2015–16).^[9]

These elevated rates not only increase maternal and neonatal health risks but also impose significant financial burdens, particularly in private facilities.

Indications of Caesarean Section

According to ICD-10 classification, the most frequent indication for caesarean delivery is a previous C-section (24.1%), followed by fetal distress (20.6%), prolonged or obstructed labor (15.9%), amniotic fluid disorders (14.3%), post-term pregnancy (13.1%), and maternal disorders associated with pregnancy (4.5%). Other less common causes include fetal malpresentation (3.5%), hypertensive disorders (2.5%), placenta praevia (0.78%), and systemic diseases complicating pregnancy (0.7%) As shown in fig. 01.^[6] Increasingly, however, elective or non-medical factors—such as maternal preference, physician convenience, and institutional practices—also play a significant role.

FIG. 01



Determinants and Socio-Cultural Influences

Findings from Demographic and Health Surveys (DHS) indicate a significant rise in C-section rates, especially in urban regions of developing countries (Stanton & Holtz, 2006; Villar et al., 2006). Several determinants contribute to this increase, including improved access to healthcare, greater availability of obstetric technology, and higher utilization of antenatal care—especially in private hospitals.

Moreover, non-clinical factors play a major role. Many women opt for caesarean delivery for cultural or personal reasons (Lo, 2003; Wagner, 2000), and profit-driven healthcare settings may further encourage this preference, either directly or indirectly (Hopkins, 2000; Potter et al., 2001). The role of physicians in influencing elective caesarean decisions has also been widely documented (Wagner, 2000). Typically, women who request or accept C-sections belong to urban, educated, and higher socio-economic backgrounds—a pattern once confined to developed countries but now increasingly evident in transitional nations such as China, Brazil, and India (Gould et al., 1989; Padmadas et al., 2000; Potter et al., 2001).^[10]

Global Disparities

The global distribution of caesarean deliveries reveals stark disparities. Rates exceed 30% in countries such as Brazil, Colombia, and the Dominican Republic, and range between 15–25% in Vietnam, Bangladesh, Egypt, Peru, and South Africa (Rosmans, Holtz & Stanton, 2006). Conversely, resource-limited settings like Sub-Saharan Africa face restricted access to safe surgical delivery, contributing significantly to high maternal morbidity and mortality.^[10]

2. RESEARCH METHODOLOGY

This review analyzes the changing trends in childbirth, emphasizing the rising preference for Caesarean Section over Normal Vaginal Delivery. Relevant literature from authentic Unani texts and modern medical sources was reviewed. Online databases such as **Google Scholar**, **PubMed**, and **ScienceDirect** were searched using keywords like “*Normal vaginal delivery*,” “*Caesarean section*,” “*Changing childbirth trends*,” and “*Unani perspective*.” Comparative data were compiled and interpreted to identify factors contributing to increased C-section rates and to explore preventive insights from Unani medicine.

3. REVIEW OF LITERATURE

3.1 Key Differences Between Cesarean and Vaginal Delivery

The essential distinction between the two delivery modes lies in how the baby is born—through the birth canal in vaginal delivery or via a surgical incision in cesarean delivery. Cesarean birth is usually reserved for specific medical indications, though elective cases are increasing globally.

Vaginal delivery involves a longer labor phase (up to 12–14 hours) but allows faster recovery and earlier maternal–infant bonding. Cesarean procedures, lasting 45–60 minutes, offer better scheduling control and less pain during birth but require longer recovery (6–8 weeks) and are associated with greater postoperative discomfort. While both procedures can be safe, cesarean deliveries carry higher risks of infection, delayed lactation, and neonatal adaptation issues. Elective cesareans are sometimes chosen for fear of labor pain or anxiety related to natural childbirth.^[5]

Table 01
Comparison Between Normal (Vaginal) Delivery and Cesarean Section

Aspect	Normal (Vaginal) Delivery	Cesarean Section (C-Section)
Nature	Natural, physiological mode of childbirth; allows gradual adaptation of mother and baby.	Surgical procedure performed when vaginal delivery poses risks to mother or fetus.
Advantages	• Expels amniotic fluid from neonate’s lungs. • Promotes immune-boosting microbial colonization. • Avoids surgical risks (infection, hemorrhage, scars). • Shorter hospital stay and faster recovery.	• Enables planned delivery, reducing anxiety. • Lowers risk of pelvic floor trauma, urinary incontinence, and sexual dysfunction.
Disadvantages	• Unpredictable onset of labor may cause anxiety. • Risk of pelvic floor injury, incontinence, or sexual dysfunction. • Possible birth trauma (e.g., shoulder dystocia).	• Longer hospitalization and recovery. • Neonatal respiratory issues due to retained lung fluid. • Higher maternal risk of hemorrhage, infection, and thromboembolism.
Common Indications	Suitable for uncomplicated pregnancies.	Previous C-section, maternal medical conditions (HTN, DM, HIV, herpes), placenta previa, breech presentation, multiple gestation, or fetal distress. ^[4]

3.2 Cesarean Delivery and Associated Risks

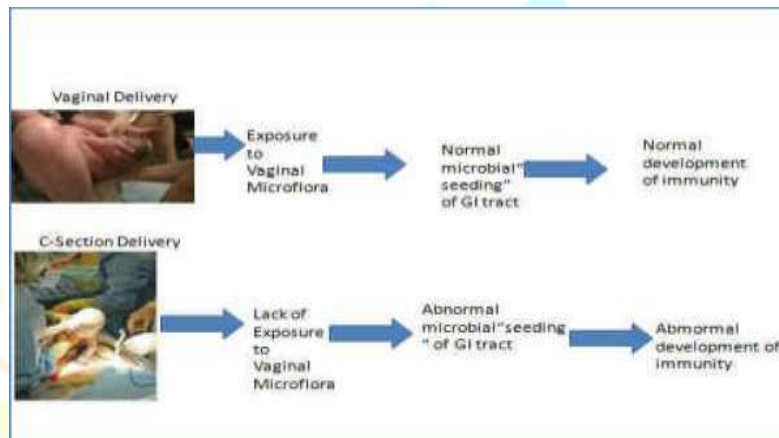
While many cesarean deliveries (CD) are performed for valid obstetrical indications, an increasing number occur due to maternal request without medical necessity. Such procedures expose neonates to several risks, including neonatal depression from general anesthesia, fetal injury during delivery, respiratory distress even at term, and breastfeeding difficulties. Parallel to the rise in CDs, there has been an upsurge in autoimmune diseases (type 1 diabetes, Crohn’s disease, multiple sclerosis) and allergic conditions (asthma, allergic rhinitis, atopic dermatitis).^[2]

Impact of Delivery Mode on Infant Microbiota and Immunity

During vaginal delivery, neonates are exposed to the maternal vaginal and intestinal microbiota, which initiate gut colonization. This process is disrupted in cesarean births, where environmental bacteria dominate early colonization. Gronlund *et al.* reported that infants delivered via cesarean section exhibit altered gut flora persisting up to six months after birth, with some studies showing differences even seven years later. These microbial changes may influence immune system development, increasing the likelihood of atopic diseases in cesarean-born infants. Thus, early microbial composition plays a vital role in long-term immune and metabolic health. ^[2]

FIG 02

INFANT IMMUNITY IN ND VS CD



Effect of Mode of Delivery on Childhood Diseases

Recent evidence links mode of delivery with childhood disease risk, particularly immune-mediated disorders:

- Respiratory and Allergic Disorders:**
 Cesarean births are associated with higher rates of asthma (especially in females) and allergic rhinitis, although no significant link is found with atopic dermatitis. The risk of asthma increases by 60% among females born via elective repeat CD compared to those exposed to labor before delivery.
- Gastrointestinal Disorders:**
 Cesarean-born children show a greater risk of celiac disease and gastroenteritis-related hospitalizations, though no association is observed with Crohn's disease or ulcerative colitis.
- Type I Diabetes Mellitus:**
 A meta-analysis reported a 19% higher risk of Type I diabetes among cesarean-born children after adjusting for confounding factors, though smaller studies show inconsistent results. ^[2]

Child Undernutrition and Mortality

Child undernutrition and mortality remain pressing issues in developing nations like India. Globally, in 2017, about 151 million children (22%) were stunted, and 45% of deaths in children under five were linked to malnutrition.

Studies indicate that delivery mode influences child health outcomes—C-section births correlate with higher risks of malnutrition and early mortality due to delayed breastfeeding and increased infection rates.

Rowe-Murray and Fisher (2002) observed that cesarean-born infants had reduced immediate skin-to-skin contact and delayed initiation of breastfeeding within 24 hours of birth. ^[3]

Impact of Delivery Mode on Neonatal and Infant Mortality

Neonatal and infant mortality rates are higher following cesarean births, especially among younger mothers (<20 years) and those with multiple pregnancies. Non-indicated cesareans can double the risk of neonatal death compared to vaginal births. Betran *et al.* (2018) emphasized that procedures conducted by inadequately trained personnel further elevate mortality risks. Vaginal deliveries remain safer overall, with mortality risk peaking after the first week of life in cesarean-born infants. ^[3]

Impact of Cesarean Delivery on Breastfeeding and Infant Health

Breast milk initiation is delayed after cesarean delivery compared to vaginal birth. As per WHO guidelines, breastfeeding should begin within the first hour of life. Infants born via C-section have a weaker immune system, making them more prone to infections and growth issues. Studies consistently show that C-sections are negatively associated with timely breastfeeding, which is linked to child stunting.

C-section infants also exhibit gut microbiota imbalances, impairing nutrient absorption and increasing the risk of overweight and obesity into early adulthood. Scott and Binns (2007) reported significant delays in lactation onset following cesarean births. Consequently, cesarean delivery can weaken the mother–infant bond, affecting child growth, psychological development, and behavioral outcomes.

Normal vaginal delivery reduces hospital stay, costs, postpartum complications, and neonatal mortality, while C-sections heighten risks of maternal injury, pain, gynecological issues, and malnutrition.

To address these issues, both public and private healthcare systems must enhance service quality and promote vaginal deliveries. Under India's National Rural Health Mission (NRHM), initiatives like Janani Suraksha Yojana (JSY) encourage rural women to access institutional maternal care — including antenatal, natal, and postnatal services. ^[3]

Reported Adverse Maternal Outcomes

In one regional study, eight maternal deaths occurred—seven postpartum and one antepartum (due to cardiac disease). Of the postpartum deaths, five followed cesarean sections, all in private hospitals and none medically justified. Causes included postpartum hemorrhage, infection, severe anemia, and pleural effusion. These findings highlight the dangers of clinically unnecessary cesareans and underscore the need to reduce primary C-sections through better labour monitoring, ultrasound assessment, and amnioinfusion for fetal distress. Strengthened policy regulation and monitoring are crucial to ensure rational C-section use. ^[6]

Mode of Delivery in Women with Bleeding Disorders

The primary objective in managing delivery for women with bleeding disorders is to minimize trauma and bleeding risk for both mother and newborn. Early recourse to cesarean section (C-section) may be appropriate in selected cases to reduce hemorrhagic complications. While C-section offers greater fetal safety, it presents higher maternal risk, though evidence remains limited in the context of bleeding disorders (James, 2010). Prolonged labor and genital or perineal trauma should be avoided to prevent excessive bleeding (Kadir, 1998; McMahon, 2001).

Vaginal delivery, when obstetrically feasible, remains a safe option and avoids surgical morbidity and anesthesia-related complications (Lee, 2006). In C-sections, careful hemostatic management is essential to control intraoperative bleeding. Both neuraxial and general anesthesia are considered safe when clotting factor levels are optimized. However, in women with bleeding disorders, neuraxial anesthesia carries a higher risk of spinal or epidural hematoma, potentially leading to neurological injury (Vandermeulen, 1994). Hence, the decision should be individualized, with patient-controlled fentanyl analgesia as an alternative (Campbell, 2003). General anesthesia is recommended when neuraxial techniques are contraindicated. ^[7]

3.3 Management of Labour and Delivery

Induction of labour should remain a consultant-led decision, as midwives—though experts in normal deliveries—are not trained to decide on induction. When the cervix is unfavourable, pregnancy may safely continue beyond 42 weeks with close monitoring (Vause, 2006). In cases of premature rupture of membranes with a hindwater leak, conservative management with prophylactic antibiotics is advised rather than immediate induction. For small babies, it is essential to differentiate intrauterine growth restriction (IUGR) from constitutionally small but healthy infants (Kiwunika & Moore, 1987).

Women should be admitted to the labour ward only once labour is established. Encouraging mobility, light meals, and home assessment by midwives has been shown to increase home-birth rates and reduce unnecessary hospital admissions. Historical data indicate that perinatal mortality does not rise until labour exceeds 48 hours in primigravidae and 24 hours in multigravidae (Butler & Bonham, 1958). Excessive reliance on augmentation today contrasts with earlier natural labour patterns, highlighting the need for patience and individualized care to avoid mislabeling women as “failing to progress.”

Occipito-posterior presentations require careful assessment, as they often need additional analgesia and syntocinon augmentation. Caesarean section for fetal distress should be reserved for cases confirmed by fetal blood sampling or a sustained fall in fetal heart rate, accompanied by effective communication and reassurance to parents.

Mild pre-eclampsia is not an indication for routine C-section; most women can deliver vaginally if the blood pressure rise is gradual and fetal condition stable. Women with a previous C-section should be encouraged to attempt VBAC, particularly if the prior surgery followed a malposition. Continuous support and communication throughout labour improve outcomes and maternal confidence (Smith et al., 2004). ^[9]

3.4 Unani Perspective on Facilitating Normal Vaginal Delivery (NVD)

In the Unani system of medicine, emphasis is placed on promoting *Wiladat Tabi'iyya* (natural delivery) and minimizing the need for operative interventions like Caesarean section. Classical scholars have outlined regimens under *Tadabeer-i-Haamla*

(antenatal care), *Tadabeer-i-Wiladat* (perinatal care), and *Tadabeer-i-Baadaz-Wiladat* (postnatal care) to ensure smooth and safe labour.

Tasheel-i-Wiladat wa Tadbeer-i-Ushr-e-Wiladat (Facilitation of Labour and Management of Dystocia)

Unani physicians recommend several preventive and promotive measures during the last trimester, particularly the ninth month, to aid natural delivery and prevent complications:

- **Dietary regimen:** Use of *Mullayin* (laxative) and *Muzliq* (lubricating) foods such as spinach, methi, chicken, and oily gravies; avoidance of constipating and astringent foods.
- **Lifestyle measures:** Regular lukewarm baths, light physical activity, and adequate rest.
- **Lubrication and hydration:** *Luaab Behidana* (*Cydonia oblonga*), *Isapghol* (*Plantago ovata*), or *Tukhm Katan* (*Linum usitatissimum*) are advised to reduce dryness and facilitate smooth labour.
- **Local applications:** *Tamreekh* (oil massage) with *Roughan Babuna* (*Matricaria chamomilla*) or *Roughan Shibt* (*Anethum sowa*) and *Humool* (suppositories) are used during labour to ease contractions.
- **Labour management:** Bladder emptying by catheterization, use of mild enemas, fomentation with fenugreek decoction if membranes are intact, and ensuring a calm, well-ventilated environment.
- **Delivery posture:** Lithotomy position is advised, and sneezing or mild abdominal pressure may assist in expulsion of the foetus and placenta.^[11]

Probable Reasons for the Decline in Normal Deliveries Compared to Ancient Times

In earlier times, pregnant women maintained an active lifestyle and followed specific regimens that supported natural delivery. Ancient texts describe practices like body purification, a balanced diet, yoga, and prenatal care throughout pregnancy, which ensured physical and mental preparedness for childbirth.

Minimal mental stress, regular physical work, squatting postures, and nutritious diets contributed to uncomplicated vaginal births.

In contrast, modern women often conceive at an older age, lead sedentary and stressful lives, and use Western toilets instead of squatting ones—reducing pelvic flexibility and perineal strength. Consequently, these lifestyle changes have led to a decline in the rate of normal vaginal deliveries.^[12]

4. DISCUSSION

The steady global rise in Caesarean Section (C-section) deliveries mirrors a shift in childbirth from a natural physiological process to a controlled medical event. While cesareans have undoubtedly saved countless maternal and neonatal lives, their overuse—often without medical justification—reflects a growing dependence on technology and convenience over nature's design. In India, the surge in private-sector C-sections highlights the influence of institutional practices, maternal anxiety, and economic incentives.

Beyond the surgical scar lies a deeper imprint—on maternal health, emotional well-being, and neonatal development. Women undergoing unnecessary C-sections face higher risks of infection, hemorrhage, and delayed recovery, while their newborns often experience respiratory issues, altered gut microbiota, and delayed initiation of breastfeeding. These subtle biological disruptions can influence lifelong immunity, metabolism, and even emotional bonding.

5. Conclusion

Childbirth is not merely a medical event—it is a natural culmination of creation, strength, and renewal. The rising rates of caesarean delivery remind us of the urgent need to restore trust in the body's innate ability to give birth. While modern obstetric care remains indispensable in high-risk situations, its overextension into low-risk pregnancies threatens both maternal and neonatal health.

Reclaiming the balance between technology and tradition is the way forward. Encouraging vaginal births through evidence-based obstetric management, patient-centered counseling, and integration of Unani practices can foster safer deliveries and healthier generations. The goal is not to reject medical advancement, but to harmonize it with nature's wisdom—ensuring that every birth is guided by necessity, compassion, and respect for the miracle of life itself.

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