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Exploring the Overuse of Cesarean Delivery Among Professional Women in Bangladesh: Insights for Maternal Health Policy

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ABSTRACT

The rate of caesarean section (CS) births in Bangladesh has risen sharply, far exceeding the 5–15% range recommended by the World Health Organization. While clinical indications account for some of this increase, behavioural and psychological factors exert a substantial influence on women's delivery choices. This study investigates those determinants by surveying 800 professional women aged 25–49 in Dhaka using a cross sectional quantitative design and a purposive homogeneous sample. Findings show strong perceptions favouring CS: 78.24% of respondents regarded caesarean birth as relatively painless, while 85.76% described vaginal delivery as highly unpleasant. The principal motivations for elective CS—despite limited clinical justification—were perceived child safety (61.94%), fear of labour pain (33.4%), and aversion to the uncertainty associated with vaginal birth (26.71%). Despite this, 64.21% of respondents acknowledged the potential risks associated with caesarean delivery. The results reveal a behavioural paradox in which knowledge of clinical risk is subordinated to feelings of safety and emotional comfort. The study argues that maternal health policy in Bangladesh should incorporate behavioural insights—such as prenatal counselling, fear management education, and improved clinician patient communication—to shift attitudes toward normal delivery, reduce unnecessary surgery, and promote safer, more equitable birth outcomes aligned with medical need.

Keywords: Caesarean section, behavioural policy, maternal health, professional women

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1. INTRODUCTION

1.1 Background and Rationale

Bangladesh's public health policy has long placed a strong emphasis on maternal health outcomes, which seek to guarantee healthy lives and advance everyone's well-being (DGHS, 2019). Improved access to trained birth attendants, institutional births, and more prenatal care have all contributed to significant advancements (DGHS, 2019). Alongside these developments, however, the increasing use of cesarean sections (CS) has become a complicated policy conundrum (Jahan, 2022). To represent medical necessity, the World Health Organization (WHO) advises that CS rates stay between 5 and 15 percent (WHO, 2015); nonetheless, in recent years, Bangladesh's rate has risen to above 45 percent, making it one of the highest in South Asia (Training, 2022) .

This increasing tendency is a reflection of changing social and behavioral dynamics in urban culture, rather than only a medical explanation (Gibbons, et al., 2010). CS deliveries are becoming more and more popular among educated, self-sufficient women, especially those working in formal fields (Carranza, 1994). This desire is influenced by some factors, including anticipated neonatal safety, concern over uncertain labor, fear of pain during delivery and convenience of time (Colomar, et al., 2021). Furthermore, this practice is reinforced among the urban middle class by societal narratives that link cesarean birth to modernity, safety and prestige (NIPORT, 2014).

Public policymaking encompasses more than just administrative operations by the government; it involves a sequence of activities influenced by several social elements (Talukdar, et al., 2022). From a governance standpoint, excessive use of CS puts a burden on the healthcare system by using scarce resources, raising postoperative problems (Sandall, et al., 2018), and driving up healthcare expenses for institutions and families (Children, 2019). Additionally, the situation shows a lack of behavioural knowledge in policy design; the clinical infrastructure has improved, but counselling techniques, communication tactics, and emotional support systems are still lacking.

Therefore, policymakers aiming to shift delivery methods toward safer, evidence-based standards must comprehend these behavioral and psychological drivers. By investigating the behavioral factors impacting CS choices among working women who have graduated in Dhaka City and by offering practical suggestions for a more behaviorally informed maternal health policy in Bangladesh, this research aims to bridge that gap.

1.2 Problem Statement

When problems during labour occur, a Caesarean section (CS) delivery is a vital medical procedure that may save lives (Ronsmans, et al., 2004). However, health policymakers in Bangladesh are now very concerned about its growing usage outside of therapeutic necessity (Jahan, 2022). In addition to the overmedicalization of delivery, the sharp rise in CS rates, which is much over the WHO's recommended threshold, indicates a developing behavioural reliance influenced by fear, societal perception and false information (Begum, et al., 2018).

The concept of "elective caesarean" has grown more common in metropolitan areas like Dhaka, where access to private healthcare is comparatively simpler and the populace is better educated and economically powerful (Ali, 2021). Nowadays, psychological comfort and perceived safety have a greater effect on women's anticipatory CS choices than medical grounds (Hopkins, 2000). According to studies, this decision-making process is heavily influenced by the social prestige attached to caesarean birth, belief in contemporary surgical techniques, dread of uncertainty during labour, and pain avoidance (Colomar, et al., 2021). Feminine culture aspires to establish a welfare society (Akhter, 2021). Current maternal-health policies, which prioritize infrastructure, training, and service delivery above the cognitive and emotional elements that influence patient behaviour, seldom ever address such behavioural aspects (DGHS, 2019).

Therefore, the issue is at the nexus of social standards, health governance, and psychology. Due to increased costs, postoperative difficulties, and needless risks for both mothers and babies, Bangladesh's growing CS incidence poses a danger to health equity (Children, 2019). The tendency is likely to continue if behavioural insights are not incorporated into the formulation of policies via awareness campaigns, prenatal counselling, and targeted education.

1.3 Objectives

This study's main goal is to examine maternal health policy related behavioural and psychological factors that contribute to the increasing trend of caesarean section (CS) deliveries among professional women living in Dhaka City. The specific objectives are:

a) To determine the psychological determinants—fear, pain expectations, safety perceptions—that affect CS preference.
b) To evaluate the variations in perceptions among four distinct groups of women, taking into account their marital and motherhood status.
c) To propose behavioural-science–informed policy strategies for reducing non-medically indicated CS in Bangladesh.

2. METHODOLOGY

The research data were obtained by applying a quantitative method. A structured questionnaire was prepared and circulated to collect data. Analyzing the answers, quantitative data were retrieved.

2.1 Study Design

Data were gathered using a cross-sectional design. A survey was done among 800 professional women in Dhaka (23.8041°N, 90.4152°E), who had graduated and were between the ages of 25 to 49 (Banglapedia, 2023). For the participants, there were three requirements. First and foremost, they had to be residents of Dhaka. Secondly, at the very least, they had a graduation degree. Lastly, they needed to be working in profitable jobs that guaranteed a consistent income.

2.2 Sampling Method

A purposive homogeneous sampling method was used in this study. Participants were selected who had similar conditions, such as having graduated, engaged in productive work, living in Dhaka city, and being aged between 25 to 49.

2.3 Data Collection

A questionnaire was prepared for data collection. The questionnaire was a structured questionnaire and different questions were asked about the childbearing process and intention for four groups of women.

i) Unmarried
ii) Married without children
iii) Married with children born by vaginal delivery
iv) Married with children born by caesarean delivery

The questionnaire had three sections. There were socio-demographic questions in the first section, such as age, financial status, profession, level of schooling, residence, marital status, etc. The second section was named behavioural insights behind CS. In this section, different psychological views were mentioned and participants' opinions on those views were asked. The third section was varied according to participants' marital and motherhood status. Different categories had different questions on that section. Category I was asked about future preference of delivery system and reasons behind them. Category II was asked almost similar questions. Category III was also asked about how they overcame psychological issues about vaginal delivery. Category IV was asked about when, why, and how they chose CS. The questionnaire was created using Google Forms and circulated online. The medium of the questionnaire was English. Based on their answers,

psychological factors and perception regarding CS were measured. Using these behavioural insights for maternal health policy on caesarean overuse was determined.

2.4 Data Analysis Method

A descriptive analysis was carried out in order to comprehend the psychological factors and perceptions of the respondents using Microsoft Excel. Using these behavioural insights for maternal health policy on caesarean overuse was determined.

3. RESULTS

3.1 Sample Coverage

800 participants were selected for the questionnaire survey. Among them, 771 responded. Each of them was highly educated (minimum Graduate), working women. The respondents were divided into four categories, and a number was given to these four types. Table 1 provides an outline of the categories and the number of respondents from each group.

Table 1: Marital status of respondents

Category	Marital Status	Number	Percentage (%)
I	Unmarried	49	6.36
II	Married without children	230	29.83
III	Married children born by vaginal delivery	173	22.44
IV	Married with children born by caesarean delivery	319	41.37

3.2 Profile of the Respondents

Some characteristics were also considered to differentiate the respondents from the rest. It was seen that 68.48% of the respondents had a graduation degree and 31.52% of them had a post-graduation degree. PhD degree was not obtained by any of them. Moreover, monthly income was also considered. It was categorized into four ranges. It was seen that 69.66% of the respondents earned between 30,000 to 50,000 Bangladeshi taka.

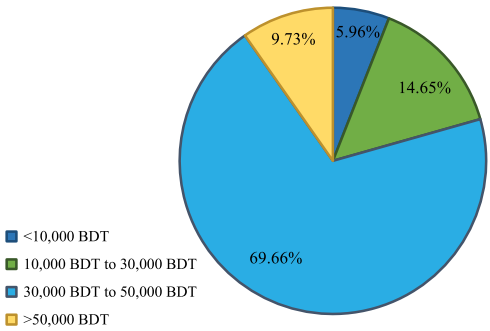

Figure 1: Pie chart of the monthly income of respondents

The respondents belonged to various professions, which were highlighted in the analysis. Eight types of profession were marked among the 771 respondents living in Dhaka city.

Table 2: Service of respondents

Profession	**Number**
Government Service	78
Doctor	90
Engineer	204
Teacher	55
Banker	110
Lawyer	95
Private Service	88
Businessman	51
Total	**771**

3.3 Behavioral Insights and Psychological Factors behind Caesarean Section

Some similar questions were asked to the four groups of women to find out the attitudes toward vaginal delivery and caesarean section. The question was basically asked to determine the perception and mentality of women (whether they were married or not) when choosing a delivery system. Questions were mainly set on three psychological views. First one is between vaginal delivery and cesarian section, women think the first one is more painful for the mother. The second one is which method women find safer from a mother's perspective.

The third one is about the safety issue from a newborn's perspective. Data found through this section of the questionnaire are given below:

Table 3: Distribution of Attitudes towards Vaginal Delivery and Caesarean Delivery

Statement assessing attitudes	Agree	Disagree	Neutral
There is no pain experienced by the patient during the Caesarean surgery.	78.24%	12.16%	9.60%
A woman experienced severe pain following a caesarean section.	64.21%	30.02%	5.77%
Cesarean section is less painful than the vaginal birth.	85.76%	5.11%	9.13%
The infant is safer after a cesarean section than after a vaginal delivery.	61.94%	28.26%	9.80%
From the woman's perspective, a cesarean delivery is safer than a vaginal delivery.	45.78%	49.45%	4.77%

Analyzing the answers, the perception of women about caesarean section could be identified.

Also, all respondents were asked about the main human behavioral causes behind choosing caesarean section over vaginal delivery. The question had three answers.

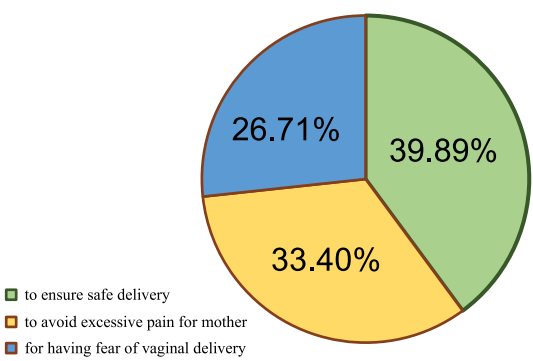

Figure 2: Pie chart representation of different opinions on choosing caesarean section over vaginal delivery by the mother

3.4 Perception of Professional Women in Caesarean Section before having any Child

Among 771 respondents, the number of non-mother respondents was 279 and that of mother respondents was 492.

3.4.1 Perception of Category I about caesarean section

Among the respondents, 49 women were unmarried and they were asked about their preference for selecting a child delivery system.

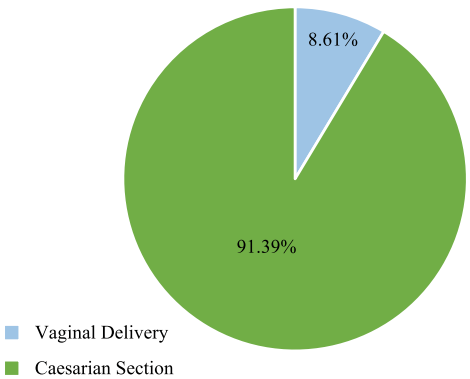

Figure 3: Graphical Representation of Preference of Delivery System of Category I Respondents

3.4.2 Perception of Category II Respondents about Caesarean Section

Respondents belonging to category II were asked similar questions.

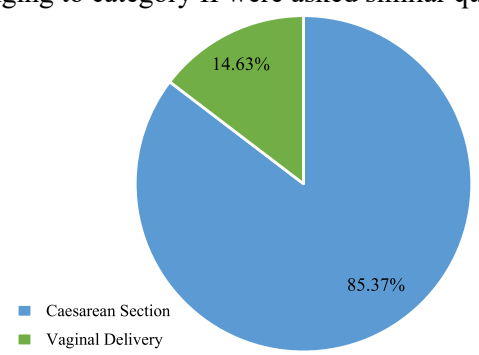

Figure 4: Pie chart on preference of delivery system of category II respondents

The portion who wanted to be future mothers were asked about their future child delivery preference and 8.61% from category I and 14.63% from category II professional women were interested in going through caesarean section. The reason was also asked of them, they gave different opinions such as that a caesarean section is a modern trend, they are unable to take excessive pain, etc.

3.5 Perception of Professional Mother in Caesarean Section

The percentage of mothers among the entire respondents was 63.81%. Among them, category III was formed with mothers who went through vaginal delivery, and category IV was formed with mothers who went through CS.

3.5.1 Preference of Delivery System among Category III Respondents

173 respondents belonged to category III who went through vaginal delivery. They were asked about their preferred delivery system during pregnancy. All of them said that they preferred vaginal delivery. They were interested in vaginal delivery even before getting pregnant. They did not suffer from any uncontrolled comorbidities like gestational diabetes, hypertension etc. 67.05% of them reported that they took preparations for vaginal delivery from the very first stage of their pregnancy such as diets, exercise etc. When they were asked about whether they were concerned about pain or fear and why they didn't go for elective CS, they gave different opinions.

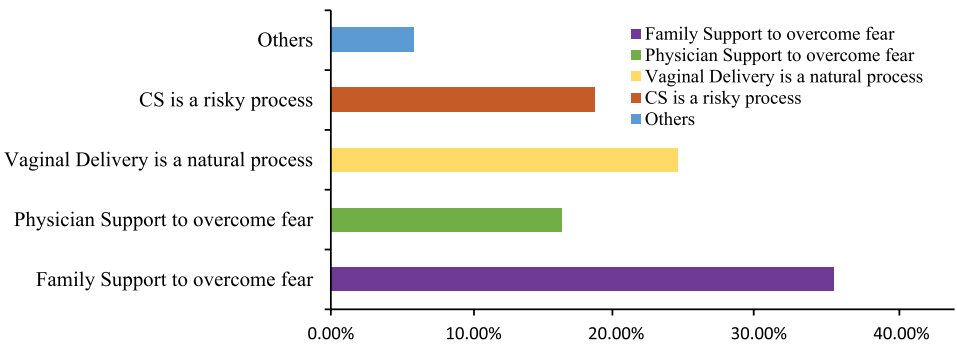

Figure 5: Bar chart on reasons behind choosing vaginal delivery by category III respondents

3.5.2 Preference of Respondents from Category IV in Caesarean Section

319 respondents belonged to category IV who went through caesarean section. They were asked what their choice was about the delivery process. 37.99% of the respondents chose elective caesarean section. Among them 8.47% chose CS at their first trimester, 40.68% chose CS at their 2nd trimester and 50.85% chose CS at the third trimester. The reason behind this choice was also asked and different opinions were mentioned. Among them 38.99% said that they wanted to ensure safety of both the mother and the baby. Some of them suffered from comorbidities like hypothyroidism, gestational diabetes etc. Though they had these conditions within the controlled range but they didn't want to take the risk. Some of them mentioned that labour pain could start at any time. At that time and place medical support could be hard to get which could disrupt the safety of the baby and the mother. 32.20% of them mentioned that they were afraid of the uncertainties. They feared that anything could happen within this long labour hour. Anytime the situation could get worse and an emergency CS might be needed. So, why go for

that uncertainty while you had an option to go for elective CS. 16.95% thought that their bodies were unable to take labour pain, so they went for CS. 6.78% were afraid of vaginal delivery process and 5.08% took CS as a modern notion.

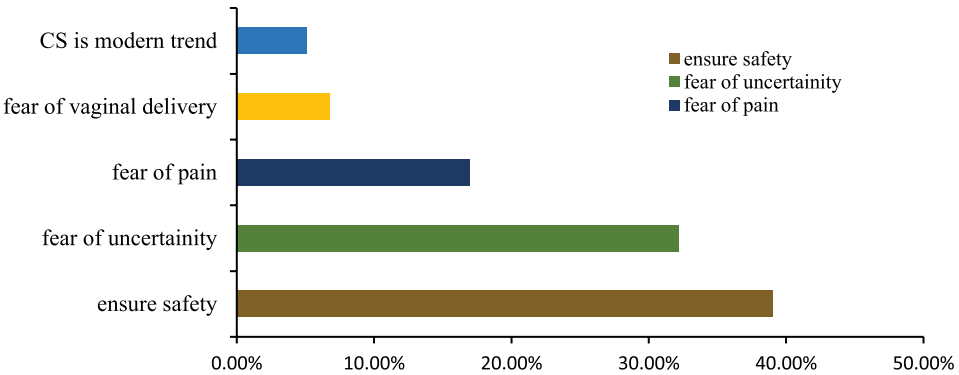

Figure 6: Bar chart on reasons behind choosing CS by Category IV Respondents

4. DISCUSSION

The findings of this study reveal a critical disjunction between medical necessity and behavioral motivation behind the growing reliance on caesarean sections (CS) among professional women in Dhaka City. Despite high educational attainment and access to healthcare, an alarming number of professional women are interested in elective CS. The result of the study highlighted that fear of vaginal delivery, excessive labor pain, uncertainty and ensuring safety are the main causes behind choosing elective CS. Those who could overcome the behavioural obstruction mainly did so due to having reliable support and counselling and those who couldn't, mainly did so, due to lack of counselling.

Among 288 Swedish women, 41% of them saw labour pain as the most awful experience, while 28% of them saw it as a desirable condition (Yearby, 2000). One of the main factors influencing women's decision to have a caesarean section is their fear of labour discomfort (Beigi et al., 2010). According to a study on Iranian women's propensity for caesarean sections, 37.2% of women were afraid of childbirth discomfort (Salehi, 2001). Furthermore, women were worried about the length of time it would take to give birth, how labour would be handled, and how it would change (Colomar, et al., 2021). According to reports, CS was the most effective method for handling the uncertainty of labour and for recovering control over the process (Colomar, et al., 2021). Women submitted to their doctor's authority to feel protected (Colomar et al., 2021). Moreover, studies show that if a

mother suffers from gestational diabetes, hypertension, prolonged labour, placenta previa and other comorbid conditions, caesarean section can ensure the safety of both mom and kid (Mylonas & Friese, 2015).

However, there are several possible risks associated with a caesarean section for both the mother and the child. In addition to intraoperative dangers such as infection, organ damage, or the requirement for a blood transfusion, there are a number of postpartum side effects that may arise, such as thromboembolic problems (Mylonas & Friese, 2015). It is important to specifically address the issues associated with subsequent pregnancies: Infertility, uterine rupture, or even placental abnormalities like accreta, increta, or placenta previa (Mylonas & Friese, 2015).

Bangladesh's existing maternal-health policy emphasizes enabling all women to have access to trained birth attendants and that the greatest number of women can have equal access to high-quality delivery care in medical facilities that are adequately staffed and equipped (DGHS, 2019). On the other hand, it does not include integrated behavioral science tools such as counselling, maternal mental health support, nudges, framing effects or emotional-risk communication. This omission perpetuates behavioral inertia and limits the effectiveness of awareness campaigns.

4.1 Behavioral Dimensions of Maternal Decision-Making

These findings highlight the dominance of emotional reasoning over medical guidance, even among educated women. The perception of caesarean delivery as modern, controlled, and convenient reflects a deep behavioral bias rooted in urban privileged culture. Current health policies only focus on reducing maternal and neonatal morbidity (DGHS, 2019). They do not adequately address this emotional component of maternal choice. As a result, women often make delivery decisions in response to fear, misinformation, and institutional persuasion rather than informed consent.

4.2 Institutional and Policy Gaps

Private and public healthcare facilities often lack structured counseling or psychological support during prenatal care. The absence of a behaviorally grounded policy framework in favour of vaginal delivery means that interventions focus on expanding physical infrastructure rather than shaping decision environments. Furthermore, data dissemination and risk communication on CS complications remain weak, contributing to a one-sided narrative where CS is viewed as a "safe and sophisticated" option.

5. POLICY RECOMMANDETION

To realign childbirth practices with evidence-based standards, Bangladesh's maternal-health strategy must incorporate behavioral insights at multiple levels:

5.1 Antenatal Behavioral Counselling:

Introduce structured counseling modules in both public and private facilities, focusing on pain management, risk understanding, and emotional preparation. Trained midwives and nurses should use empathetic communication to reduce anxiety and build trust in normal delivery.

5.2 Behavioral Communication Campaigns:

Nationwide media campaigns should be designed using behavioral framing emphasizing "confidence in natural birth" rather than fear of surgery. Positive stories of successful vaginal deliveries can serve as social proof to counter prevailing myths.

5.3 Regulatory and Institutional Incentives:

Strengthen regulatory oversight of private hospitals by linking CS reporting to licensing and performance audits. Introduce financial disincentives for non-medically indicated CS while rewarding evidence-based obstetric practices.

5.4 Health-System Nudges:

Implement administrative "choice architecture" tools in hospital admission protocols—for example, requiring second medical opinions before elective CS approval or including visual risk charts to prompt reflection.

5.5 Integration of Behavioral Training:

Include behavioral economics and patient psychology modules in medical and nursing curriculum to sensitize practitioners to emotional determinants of maternal decisions.

5.6 Data-Driven Monitoring:

Develop a digital registry for CS tracking by district and facility type. Regular data visualization and public reporting can enhance transparency and accountability.

6. CONCLUSION

The rapid escalation of caesarean section (CS) deliveries in Bangladesh constitutes not merely a clinical challenge but a significant public policy and governance concern. Notwithstanding comparatively high levels of educational attainment

and access to health-related information, maternal decision-making is often shaped more by emotional considerations and socially constructed perceptions than by clinical guidance. The increasing preference for elective CS thus reflects a deeper behavioural predisposition that prevailing policy frameworks have yet to address in a systematic and effective manner.

From a public policy perspective, the implications are substantial. The disproportionate use of CS contributes to rising healthcare expenditure, exposes mothers and neonates to avoidable surgical risks, and imposes additional pressure on an already resource-constrained health system. Addressing this challenge therefore necessitates a shift in policy orientation—from a narrow focus on infrastructural expansion and service provision to a governance model informed by behavioural insights. The institutional integration of behavioural approaches into maternal-health policy, through structured counselling mechanisms, improved risk communication, regulatory oversight, and incentive-based interventions, offers a viable pathway for reshaping the decision-making environment of both service providers and expectant mothers.

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