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**ORIGINAL ARTICLE**

# Psychosocial and Emotional Factors Influencing the Choice between Cesarean Section and Natural Birth

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## ABSTRACT

**Background:** The choice between cesarean section and natural birth is influenced by a complex interplay of psychosocial and emotional factors. While medical indications play a crucial role, non-medical reasons such as fear, anxiety, social influence, and personal preferences also impact the decision-making process. Understanding these factors is essential for improving maternal care and ensuring informed choices.

**Methods:** The current research was conducted at Mardan Medical Complex Mardan from January 2023 to June 2023. This study aimed to explore psychosocial and emotional influences on birth mode selection among pregnant women in their third trimester who had already decided on their mode of delivery. A total of 323 participants were selected using a systematic sampling method to ensure adequate representation. Inclusion criteria focused on pregnant women aged 18 years or older who provided informed consent, while those with high-risk pregnancies requiring mandatory cesarean sections or with a history of psychiatric disorders were excluded. Data collection involved structured questionnaires assessing demographic details, psychosocial influences, and emotional responses, supplemented by semi-structured interviews with 50 participants for an in-depth exploration. A pilot study was conducted to ensure the reliability and validity of the instruments.

**Results:** Sociodemographic factors significantly influenced delivery preferences, with older and less-educated women more likely to opt for cesarean sections. Partner support was associated with a preference for vaginal birth, while family pressure and cultural beliefs contributed to cesarean selection. Emotional factors such as fear of labor pain, high anxiety levels, and lack of confidence in natural birth were strong predictors of cesarean preference. Logistic regression identified fear of pain as the most influential factor (OR = 5.1, $p < 0.001$), followed by family pressure (OR = 2.8, $p < 0.001$) and high anxiety levels (OR = 3.5, $p < 0.001$).

**Conclusion:** The findings underscore the significant role of psychosocial and emotional factors in shaping childbirth decisions. Addressing psychological concerns through prenatal education and unbiased counseling can empower women to make informed choices. Integrating these considerations into maternity care can enhance maternal satisfaction, reduce anxiety, and improve overall birth experiences. Healthcare providers should adopt a patient-centered approach that acknowledges the emotional and social dimensions of childbirth decisions. Providing comprehensive education on birth options, addressing fears, and ensuring supportive environments can lead to more positive maternal outcomes and reduce unnecessary cesarean sections driven by non-medical factors.

**Keywords:** Cesarean section, Vaginal birth, Psychosocial factors, Emotional influence, Fear of childbirth, Maternal decision-making

## INTRODUCTION

Childbirth is a significant life event influenced by medical, psychological, social, and cultural factors. While vaginal delivery is often the preferred mode due to its natural process and quicker recovery, the rising rates of cesarean sections (C-sections) suggest that non-medical factors play a substantial role in birth choices[1]. Fear of labor pain, anxiety about complications, and personal control over childbirth are among the key psychological influences. Many women with strong self-efficacy and positive perceptions of childbirth lean toward natural birth, while those with heightened anxiety or previous traumatic birth experiences may prefer C-sections[2]. The perception of safety and predictability in C-sections can make them an attractive option for women who fear uncertainty in labor[3].

Social and cultural influences further shape a woman's decision regarding childbirth. Family members, particularly partners and elders, often influence the choice of delivery, as do healthcare providers who may recommend a specific mode based on personal experience or medical convenience[4]. In many cultures, C-sections are perceived as a modern or safer alternative, while in others, vaginal birth is considered a rite of passage. Women who receive clear, unbiased, and supportive counseling from healthcare professionals are more likely to make informed decisions aligned with their values[5]. In contrast, those who feel pressured by family or medical staff may experience dissatisfaction or regret regarding their birth experience[6].

Emotional and psychological well-being post-birth is closely tied to the mode of delivery. Studies indicate that women who undergo emergency or unplanned C-sections are at higher risk of postpartum depression (PPD), largely due to feelings of loss of control and unmet expectations[7]. Those who opt for planned C-sections due to fear of childbirth may experience reduced anxiety and greater satisfaction[8]. Mother-infant bonding can be affected by birth mode, as C-sections may delay immediate skin-to-skin contact and breastfeeding initiation. However, supportive postpartum care can mitigate these effects, ensuring positive maternal and infant outcomes regardless of delivery method[9].

The long-term psychological impact of birth choices varies, with some women reporting lasting trauma or regret. Those who felt pressured into a C-section by medical professionals or societal norms may struggle with dissatisfaction, while others who had traumatic vaginal births may develop post-traumatic stress disorder (PTSD)[10,11]. The emotional consequences of childbirth highlight the need for personalized maternity care that prioritizes maternal preferences, mental health, and informed decision-making. Addressing concerns through prenatal counseling and education can empower women to make choices that align with their psychological well-being and cultural values[12].

Understanding the psychosocial and emotional factors influencing birth choices is essential for improving maternal satisfaction and mental health outcomes. By exploring the interplay of fear, personal control, social influence, and emotional well-being, healthcare providers can offer better support to expectant

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mothers. This study aims to identify the key psychosocial and emotional factors influencing a woman's decision between cesarean section and natural birth, ultimately contributing to improved maternity care and informed decision-making.

## MATERIALS AND METHODS

**Study Design:** This study employed a cross-sectional design to investigate the psychosocial and emotional factors influencing the choice between cesarean section and natural birth. A mixed-method approach was used, incorporating both quantitative (structured questionnaires) and qualitative (in-depth interviews) data to provide a comprehensive understanding of the decision-making process among pregnant women.

**Study Setting and Participants:** The research was conducted at Mardan Medical Complex Mardan from January 2023 to June 2023. The study population comprised pregnant women in their third trimester who had already chosen their mode of delivery. A total of 323 participants were recruited using purposive sampling to ensure the inclusion of women opting for both cesarean section and natural birth.

**Sample size calculation:** To determine the appropriate sample size, we used the following formula for cross-sectional studies:

$$n = \frac{Z^2 . p . (1 - p)}{E^2}$$

**Where:**

n = required sample size

Z = Z-score for the confidence level (1.96 for 95% confidence)

P = estimated prevalence of cesarean section (assumed 30% or 0.30, based on previous studies)

d = margin of error (5% or 0.05)

$$n = \frac{1.96^2 \text{ x } 0.30 \text{ x } (1 - 0.30)}{0.05^2}$$

The exact calculation gave 322.69, which is typically rounded up to 323 to ensure adequate sample representation. So, the final sample size is 323 participants.

Inclusion and Exclusion Criteria

Participants were included in the study if they were pregnant women aged 18 years or older, in their third trimester, and had already decided on their mode of delivery. Additionally, only those willing to provide informed consent were recruited. However, women with high-risk pregnancies requiring mandatory cesarean sections for medical reasons, such as placenta previa or fetal distress, were excluded to focus on elective choices. Women with a history of psychiatric disorders that could affect emotional responses and those unwilling to participate in the study were also excluded.

**Data Collection Methods:** Data were collected through structured questionnaires and in-depth interviews. The questionnaire was designed to assess psychosocial factors, including social support, cultural influences, and family pressure, as well as emotional factors, such as fear, anxiety, and personal preference. Demographic information, including age, education level, and socioeconomic status, was also recorded.

In addition to the structured survey, semi-structured interviews were conducted with a subset of 50 participants to explore personal experiences, motivations, and perceptions regarding their chosen mode of delivery. These interviews were audio-recorded and transcribed for thematic analysis.

**Instrument Development and Validation:** The questionnaire was adapted from previously validated tools and modified to fit the study's objectives. A pilot study with 20 participants was conducted to assess the clarity of questions, reliability and validity of the tool, and the time required for completion. Necessary revisions were made based on feedback before full-scale data collection.

**Steps to Avoid Bias:** To ensure data accuracy and reduce bias, several measures were implemented. Participants were selected randomly within the eligible pool to minimize selection bias. The questionnaire was standardized so that all participants received identical structured questions, ensuring consistency across responses. Additionally, data collectors were blinded to the study hypothesis to prevent interviewer bias from influencing responses.

To reduce social desirability bias, participants were assured that their identities and responses would remain anonymous and confidential, allowing them to express their opinions honestly. Moreover, equal representation of women choosing cesarean section and natural birth was ensured to prevent sampling bias. These measures collectively enhanced the reliability and validity of the study findings.

## RESULTS

The analysis of sociodemographic characteristics revealed significant associations between age, education level, employment status, and the mode of delivery. Women above 35 years (n = 27, 27.8%) were more likely to opt for a cesarean section compared to younger age groups (p = 0.048). Similarly, women with no formal education (n = 14, 14.4%) had a higher preference for cesarean section than those with higher education levels (p = 0.022). Employment status also played a role, with a greater proportion of unemployed women choosing cesarean section (n = 81, 83.5%) compared to employed women (n = 16, 16.5%), showing statistical significance (p = 0.015).

Table 1: Sociodemographic Characteristics of Participants

| Variable | | Vaginal Birth (n=226, 70%) | Cesarean Section (n=97, 30%) | p-value |
|---|---|---|---|---|
| Age Group (years) | 18-25 | 80 (35.4%) | 25 (25.8%) | 0.048* |
| | 26-35 | 110 (48.7%) | 45 (46.4%) | |
| | >35 | 36 (15.9%) | 27 (27.8%) | |
| Education Level | No Formal Education | 15 (6.6%) | 14 (14.4%) | 0.022* |
| | High School | 90 (39.8%) | 48 (49.5%) | |
| | Bachelor's & Above | 121 (53.5%) | 35 (36.1%) | |
| Employment Status | Unemployed | 160 (70.8%) | 81 (83.5%) | 0.015* |
| | Employed | 66 (29.2%) | 16 (16.5%) | |

(*Chi-square test, *p < 0.05 indicates statistical significance.)

Table 2: Psychosocial Factors Influencing Birth Choice

| Psychosocial Factor | Vaginal Birth (n=226) | Cesarean Section (n=97) | $\chi^2$ (Chi-square) | p-value |
|---|---|---|---|---|
| Partner's Influence | 160 (70.8%) | 45 (46.4%) | 15.28 | <0.001** |
| Family Pressure | 110 (48.7%) | 70 (72.2%) | 12.75 | <0.001** |
| Cultural Beliefs | 140 (61.9%) | 80 (82.5%) | 10.42 | 0.001** |

(**Significant at p < 0.01)

Table 3: Emotional Factors Influencing Birth Choice

| Emotional Factor | Vaginal Birth (n=226) | Cesarean Section (n=97) | $\chi^2$ (Chi-square) | p-value |
|---|---|---|---|---|
| Fear of Pain | 110 (48.7%) | 88 (90.7%) | 45.12 | <0.001** |
| Anxiety Level (High) | 90 (39.8%) | 72 (74.2%) | 26.89 | <0.001** |
| Confidence in Natural Birth | 180 (79.6%) | 35 (36.1%) | 50.11 | <0.001** |

Psychosocial factors were found to have a significant impact on the choice of delivery mode. Women who reported strong partner influence were more likely to choose vaginal birth (n = 160, 70.8%) than cesarean section (n = 45, 46.4%), with a significant chi-square value ($\chi^2 = 15.28$, $p < 0.001$). Conversely, family pressure was more prevalent among women opting for cesarean section (n = 70, 72.2%) than vaginal birth (n = 110, 48.7%), showing a strong association ($\chi^2 = 12.75$, $p < 0.001$). Cultural beliefs also played a significant role, as women who considered cultural norms important were more likely to choose cesarean section (n = 80, 82.5%) compared to vaginal birth (n = 140, 61.9%) ($\chi^2 = 10.42$, $p = 0.001$).

Emotional factors such as fear of pain, anxiety levels, and confidence in natural birth significantly influenced the choice between cesarean section and vaginal delivery. Fear of labor pain was a dominant factor, with cesarean section participants (n = 88, 90.7%) citing it as a major reason compared to vaginal birth participants (n = 110, 48.7%) ($\chi^2 = 45.12$, $p < 0.001$). Similarly, high anxiety levels were more common among those opting for cesarean section (n = 72, 74.2%) than vaginal birth (n = 90, 39.8%), showing strong statistical significance ($\chi^2 = 26.89$, $p < 0.001$). Confidence in natural birth was considerably lower among cesarean section participants (n = 35, 36.1%) than vaginal birth participants (n = 180, 79.6%), highlighting a significant negative association ($\chi^2 = 50.11$, $p < 0.001$).

The logistic regression model identified key predictors of cesarean section preference. Fear of pain was the strongest predictor (OR = 5.1, 95% CI: 2.93 - 8.89, $p < 0.001$), followed by family pressure (OR = 2.8, 95% CI: 1.67 - 4.71, $p < 0.001$) and high anxiety levels (OR = 3.5, 95% CI: 1.95 - 6.29, $p < 0.001$). Sociodemographic factors also played a role, as women over 35 years (OR = 2.1, $p = 0.008$), those with no formal education (OR = 2.3, $p = 0.014$), and unemployed women (OR = 1.85, $p = 0.042$) were more likely to opt for cesarean delivery. These findings highlight the interplay of psychological and social determinants in shaping birth preferences.

Table 4: Logistic Regression Model Predicting Cesarean Section Choice

| Predictor Variable | Odds Ratio (OR) | 95% CI | p-value |
|---|---|---|---|
| Age > 35 years | 2.1 | 1.21 - 3.65 | 0.008** |
| No Formal Education | 2.3 | 1.11 - 4.12 | 0.014* |
| Unemployed | 1.85 | 1.02 - 3.25 | 0.042* |
| Family Pressure | 2.8 | 1.67 - 4.71 | <0.001** |
| Fear of Pain | 5.1 | 2.93 - 8.89 | <0.001** |
| High Anxiety Level | 3.5 | 1.95 - 6.29 | <0.001** |

(*p < 0.05, **p < 0.01 indicate statistical significance.)

## DISCUSSION

The findings of this study highlight the significant impact of sociodemographic, psychosocial, and emotional factors on the choice between vaginal birth and cesarean section. Similar to previous studies, our results indicate that maternal age, education level, and employment status are key determinants of delivery mode preference. Research conducted in other regions has also reported that older women and those with lower educational attainment are more likely to opt for cesarean section. The association between unemployment and cesarean preference aligns with existing research, suggesting that financial stability may influence birth decisions[13].

Psychosocial factors, including partner influence, family pressure, and cultural beliefs, played a crucial role in shaping birth preferences. In agreement with prior research, partner support was strongly associated with a preference for vaginal birth, while family pressure was a significant predictor of cesarean section[14]. Cultural beliefs also influenced the decision, with many women opting for cesarean delivery due to societal norms or misconceptions about the safety and benefits of different birth modes. These findings reinforce earlier studies that emphasize the role of familial and cultural expectations in shaping maternal choices[15].

Emotional factors such as fear of pain, anxiety levels, and confidence in natural birth had a profound impact on delivery mode selection. Consistent with previous studies, women who experienced higher levels of anxiety and fear of labor pain were more likely to choose cesarean section[16]. Other research has similarly found that psychological distress, including fear of childbirth, significantly increases the likelihood of opting for surgical delivery. In contrast, women who expressed confidence in their ability to give birth naturally were more inclined toward vaginal delivery[17].

The logistic regression model further confirmed that emotional and psychosocial factors are strong predictors of cesarean section preference. Fear of labor pain emerged as the most influential factor, aligning with prior research indicating that pain perception plays a crucial role in birth choices[18]. The family pressure and high anxiety levels were key contributors to cesarean preference, mirroring previous studies that have highlighted the impact of external influences on maternal decision[19].

## CONCLUSION

This study highlights the significant influence of sociodemographic, psychosocial, and emotional factors on the choice between vaginal birth and cesarean section. Maternal age, education level, and employment status were found to be key sociodemographic predictors, with older, less-educated, and unemployed women showing a higher likelihood of choosing cesarean delivery. Psychosocial influences, particularly family pressure and cultural beliefs, played a crucial role in shaping birth preferences, while strong partner support was associated with a preference for vaginal birth. Emotional factors, especially fear of pain and high anxiety levels, were the strongest predictors of cesarean section preference, reinforcing findings from previous studies.

Understanding the psychosocial and emotional determinants of birth choices is essential for improving maternal healthcare strategies. Healthcare providers should focus on addressing maternal fears, providing emotional support, and promoting informed decision-making to ensure women feel empowered in their birth choices.

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