

A Qualitative analysis of parturients' experience of spinal anesthesia and postoperative complaints

ABSTRACT

Background: Cesarean deliveries have increased globally, with regional anesthesia being the preferred technique. Despite the advantages of the procedure, parturients experience apprehension regarding pain, mobility, and complications. The postoperative period following cesarean delivery can also be challenging. However, there is limited qualitative research exploring parturients' experiences with regional anesthesia for cesarean delivery and postoperative recovery.


Methods: A qualitative study using in-depth interviews was conducted with 12 primiparous parturients who underwent cesarean delivery under regional anesthesia. Interviews explored knowledge, perceptions, and experiences regarding regional anesthesia, cesarean delivery, and postoperative recovery. Data were analyzed using thematic analysis.

Results: Parturients in the study reported experiencing pregnancy-related complications necessitated for opting cesarean delivery instead of vaginal delivery. The study revealed substantial knowledge gaps among parturients regarding cesarean section (CS) and anesthesia. Their decision for CS was driven by prioritizing fetal safety over personal comfort. Parturients did not have many concerns about anesthesia and were focusing mainly on neonatal wellbeing. They had limited recollection of the anesthesia experience but vividly remembered the delivery process and postoperative pain. A strong desire for recovery to provide neonatal care was expressed. Despite challenges, parturients reported overall satisfaction with the CS experience and willingness to recommend it when medically indicated.

Conclusion: The study highlights the need for comprehensive education on regional anesthesia, postoperative care, and coping strategies for parturients undergoing cesarean delivery. It emphasizes judicious use of cesarean delivery based on medical necessity while ensuring optimal maternal and neonatal outcomes. Further qualitative research with larger samples is recommended.

Key words: Cesarean, neonatal, parturients

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ARUNACHALAM R, SUDHAKAR D S¹, SELVAKUMAR R², PRATHIBA BHARATHI T³, MURUGESAN K⁴, RAKESH ANBAZHAGAN⁴, RASHMI DHUNGANA⁵

Department of Anaesthesiology, Government Mohan Kumaramangalam Medical College, Salem, Tamil Nadu, ¹Department of Anaesthesiology, Government Pudukottai Medical College, Pudukottai, Tamil Nadu, ²Department of Anaesthesiology, Government Karur Medical College, Karur, Tamil Nadu, ³Department of Anaesthesiology, Government District Headquarters Hospital Cheyyar, Thiruvannamalai, Tamil Nadu, ⁴Department of Anaesthesiology, Government Dharmapuri Medical College, Dharmapuri, Tamil Nadu, ⁵Department of Evidence Synthesis, coGuide Academy, Bengaluru, Karnataka, India, Department of Research Monitoring and Evaluation, Sahara, Nepal

Address for correspondence: Dr. Selvakumar R, Department of Anaesthesiology, 6th Cross Rd, Gandhi Gramam, North Gandhi Gramam, Karur, Tamil Nadu - 639 004, India.
E-mail: drselvaanesthetist@gmail.com

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Introduction

Cesarean delivery, a pivotal surgical procedure in modern obstetrics, has witnessed a profound increase in prevalence globally crossing the World Health Organization (WHO) threshold of 15%.^[1,2] Regional anesthesia techniques, notably spinal and epidural anesthesia, are the preferred anesthetic techniques over general anesthesia.^[3] The advantages encompass the circumvention of airway instrumentation, a diminished risk of aspiration, and the facilitation of early maternal-infant bonding, thereby being the recommended modality in contemporary obstetric anesthesia practice.^[4]

Despite the well-established merits of regional anesthesia, the parturient's experience can be full of trepidation and apprehension, stemming from concerns regarding pain, impaired mobility, and potential complications.^[5] Furthermore, the postoperative period following cesarean delivery can be challenging. It is often replete with physical difficulties, such as going through pain and mobility limitations.^[6] Emotional challenges also arise, including the complexities of infant care.^[7] All these factors may profoundly impact the parturient's overall experience and satisfaction during the postoperative period.

While clinical outcomes and complication rates are meticulously monitored, a paucity of qualitative research exists that delves into the subjective experiences and perspectives of parturients undergoing regional anesthesia for cesarean delivery.^[8] The subsequent postoperative recovery experience is also not well explored. Garnering insights into these lived experiences from the patient's vantage point is paramount. This is necessary for refining the quality of care and augmenting patient satisfaction.

Qualitative research methodologies can elucidate the lived experiences, emotions, and perceptions of parturients regarding regional anesthesia. They can also shed light on the parturients' experiences during their postoperative stay. This study aims to collect and analyze the parturient experience with regional anesthesia during cesarean delivery and the following postoperative hospitalization. By exploring the subjective experiences, concerns, and viewpoints of parturients who have undergone this process through in-depth interviews, the study seeks to identify areas where improvements can be made in the delivery of care.

Methods

Study design and setting

We conducted a qualitative study among the parturients who received their service from Government Dharmapuri Medical College from June 2022 to July 2022. An in-depth

interview was conducted among 12 parturients. A study guide was compiled to collect all the relevant information from the parturients.

The collected transcripts were coded and categorized based on the questions. The codes were grouped into themes for thematic analysis. A combined inductive and deductive approach was used to develop themes from the codes for the thematic analysis. On analyzing, a few themes were developed and added up based on the information collected in the interview. The recordings were transcribed using MS Word, and the codes were categorized and clubbed using MS Excel. The findings were compared and contrasted under relevant themes and were presented in a narrative format.

Data collection

Study participants were recruited using a snowball sampling method in order to reach the desired sample. Snowball sampling was selected as an effective means of accessing this specific population. Initial key participants who met the inclusion criteria were asked to refer other potential participants from among their networks. Sampling continued in waves through these referral chains until thematic saturation was reached. This sample size aligned with commonly accepted principles for minimum sample size in qualitative research.^[9]

Ethical consideration

Ethical approval was granted by the Institutional Human Ethics Committee at Government Dharmapuri Medical College (IEC:3/2022). Informed consent was obtained from all participants, in accordance with approval from the ethical review committee, after consideration of cultural norms and practical constraints on collecting written consent. Permission to use hospital premises for data collection was also secured from hospital authorities. The consent process included a detailed interview procedure. The completeness of qualitative research activities was verified through application of the Relevance, Appropriateness, Transparency and Soundness review guidelines when preparing the manuscript.

Data analysis

We conducted a thematic analysis using the deductive framework analysis approach developed by the National Centre for Social Research.^[10] Data collection, transcription, and analysis occurred iteratively. Initial transcriptions were in Tamil and were back-translated into English prior to coding. An *a priori* codebook was developed based on research themes, with definitions, subcodes, usage rules, and exceptions for each code. Study findings were systematically organized into matrices using these *a priori* codes to identify recurrent themes emerging from across participants.

Summarized findings were compared and contrasted by theme in the matrices.

Parturients' experience on regional anesthesia during CS and views on their postoperative experiences were collected through interview. The same themes which were commonly being reflected across the participants were grouped together. However, divergent but relevant themes were also reported separately. The intracoder reliability was reported as 80% when checked between the research assistant and the coauthor's initial coding on the face-to-face interviews. Disagreement over coding was handled through rereading interview data and further discussion between researchers.

Results

This qualitative study aimed to elucidate the comprehensive experience of parturients who underwent cesarean section (CS) under regional anesthesia. In-depth interviews were conducted among 12 primiparous participants to gain insights into their reflections and perspectives regarding the overall experience. The major themes that emerged from the interviews centered around pain management, limitations in mobility, and the compelling desire to regain confidence in resuming routine activities, particularly concerning neonatal care.

The mean age of the parturient cohort undergoing cesarean delivery was 21.16 ± 0.77 years. According to the responses collected, nearly all participants reported experiencing pregnancy-related complications, which served as the medical indications necessitating CS instead of attempting normal vaginal delivery. The most frequently cited complications related to the labor process included failed labor induction, breech presentation, fetal distress, meconium-stained amniotic fluid, and post-term gestation.

The major findings of this study elucidate the postoperative complaints and anesthetic experiences of primiparous parturients. These findings are organized and presented under the following themes:

Theme 1: Knowledge on CS

"No, I don't have any idea about LSCS"

"No, I don't know, I expected only normal delivery and I have read about cesarean section"

The first major theme that emerged from the interviews pertained to the parturients' knowledge and understanding

of CS. The responses revealed a substantial knowledge gap among the participants regarding the procedural aspects and indications for CS. The majority of respondents reported being initially unaware of the details and rationale for undergoing CS. While a few participants mentioned having heard about the procedure from family members or relatives, they lacked a clear comprehension of the specific conditions that necessitate a CS. This finding highlights a significant deficit in the existing knowledge and awareness among parturients concerning CS, underscoring the need for improved education and counseling in this area.

Theme 2: Reason to go for CS

"As my baby's head is not turned, they said LSCS is ideal from my baby"

"My Baby had difficulty in breathing, so we did LSCS"

A subsequent theme that emerged from the interviews pertained to the parturients' rationale for opting for CS over awaiting normal vaginal delivery. Very few participants reported preplanning or a preference for CS delivery. Two respondents cited prolonged labor, characterized by inadequate and untimely cervical dilation, as the reason for accepting the recommendation for CS by their healthcare providers. Notably, the predominant perception driving the decision to undergo CS among the interviewed parturients was an inclination toward prioritizing fetal safety over personal comfort. Several participants reported experiencing complications such as hypertensive disorders, reduced fetal movements, and premature rupture of membranes, which necessitated a CS delivery to mitigate potential risks to the neonate.

Theme 3: Knowledge and perception toward use of anesthesia

"My Relative have said that they'll give injection on my lower back and it will become numb and you won't face any pain"

"Yes, They had a good conversation with me, I already know and had idea about anesthesia, they said that I will not have any pain during surgery and numbness will be there"

The third major theme that emerged from the interviews centered on the parturients' knowledge and perceptions regarding the use of anesthesia during delivery. The responses revealed a significant knowledge gap, with the majority of participants lacking awareness about anesthesia, except for a few. Those who were informed by their healthcare

providers prior to the surgical procedure reported being told about the administration of an injection that would induce numbness from the chest area downward. Notably, none of the respondents expressed any concerns or objections toward the use of anesthesia as their primary focus was on the safe delivery of their neonate. The parturients' perceptions were predominantly shaped by a prioritization of neonatal safety over their own discomfort or pain during the procedure.

Theme 4: Experience of anesthesia

"They gave injection on my back, while making me sit erect, they kept pressure cuffs over my hands they made me lie down on the bed. That injection gave numbness, I was aware of what was happening throughout my surgery. But I did not have any pain"

When inquired about their experience with anesthesia during the procedure, none of the respondents could vividly recall the specifics of that particular scenario. However, their responses reflected a predominant concern regarding the time of delivery and the safe arrival of their neonate. The majority of participants could recollect details such as the duration of the procedure, their actions and behaviors, and the conversations that took place within the operating room during the surgery. A common theme that emerged was the overwhelming sense of relief experienced by the parturients upon the successful delivery of their neonate. The respondents described a confluence of emotions, including happiness and elation, tempered by residual anxiety. Their responses highlighted that the primary focus during the intraoperative period was centered on the safe delivery of their child, superseding specific recollections of the anesthetic experience.

Theme 5: Postoperative experience

"I was so happy that my baby was totally fine and came out with no problem."

"I had mild pain around the suture site for that they gave me tablets and an injection and the pain subsided gradually."

When discussing their postoperative experience, the majority of parturients reported experiencing pain and shivering during the immediate postpartum period. Additionally, they described an inability to consume food for approximately 1 day following the CS. Another common theme that emerged was the overwhelming desire to regain consciousness and alertness upon being reunited with their neonate in the postpartum ward. The responses revealed a shared

sentiment among the mothers, expressing fervent hopes for a quick recovery to enable them to assume neonatal care responsibilities promptly. Notably, a few participants reported experiencing less pain than anticipated, contradicting the commonly held expectations based on anecdotal accounts of postcesarean discomfort.

Theme 6: Postpartum/overall CS experience

"I was Satisfied and I don't have any problem and I will recommend others don't get scared, they will give injection after that your body will be numb and you wont get pain during entire operation. But you will be aware of things going in operation theatre."

The interviews yielded another prominent theme centered on the parturients' postpartum experiences and their overall perceptions of the CS procedure. Despite acknowledging the presence of postoperative pain and complications, the respondents expressed that these concerns were overshadowed by their primary focus on ensuring the safety and providing care for their neonates. Notably, a few participants reported that the CS experience was not as daunting as they had initially anticipated, leading them to express willingness to recommend the procedure to others as a potentially life-saving intervention for both the mother and the baby. However, these participants also emphasized the importance of awaiting normal vaginal delivery in the absence of absolute medical indications, underscoring that CS should not be opted for without compelling clinical justifications.

Discussion

The present study highlights the minimal knowledge of parturients regarding the choice of delivery method, which aligns with the findings of several other studies.^[11,12] A study conducted in Tamil Nadu exploring knowledge about CS delivery revealed a significant knowledge gap among the population, potentially contributing to the increasing medicalization and preference for CS. Notably, the study found that education and training programs aided participants in enhancing their decision-making process and mitigating fears associated with childbirth.^[13] Similarly, a quantitative study in Thailand demonstrated that women who attended more than five antenatal care visits were more likely to undergo CS (OR 2.10, 95% CI 2.04–2.17) compared to those with fewer visits, further underscoring the trend toward medicalization of CS.^[11]

Consistent with our findings, the literature reports instances of planned CS, pregnancy complications,

and lack of procedural awareness among parturients. Additionally, respondents in the present study cited fears surrounding childbirth and safety concerns related to health risk perceptions, aligning with existing research.^[14] However, factors such as negative previous birth experiences, positive attitudes toward CS, access to biased information, and superstitious beliefs regarding auspicious birth dates were not explicitly mentioned by our participants.^[14]

Regarding anesthesia perceptions, this study revealed that parturients expressed lower concern for their own pain relief in favor of ensuring their child's safety. This contrasts with some existing studies indicating patient misunderstanding or negative perceptions toward anesthesia^[15,16] Another study from Canada highlighted fears among patients, such as brain damage, persistent pain, or death, underscoring the need for adequate preoperative education to address such concerns.^[17] Furthermore, Leffert *et al.*^[18] discussed the association between general anesthesia for CS and increased maternal pain and higher rates of postpartum depression requiring hospitalization.

The present study also explored postpartum experiences, with participants expressing feelings of failing as mothers, due to practical difficulties in caring for their newborns during physical recovery from CS. Similarly, feelings of guilt were reported when women felt their ability to care for their infants was limited by postoperative complications and the need for medical attention.^[19] This highlights the potential conflict between clinical guidance emphasizing adequate rest during recovery and the typical responsibilities of new mothers, who often undertake the majority of household and child-caring duties.

Notably, the responses of our participants regarding postoperative anxiety and physical complaints were consistent with the experiences of patients undergoing other surgical procedures involving anesthesia.^[20] Previous research suggests that moderate levels of anxiety may be beneficial for recovery.^[21]

In summary, this study contributes to the existing literature by providing qualitative insights into the knowledge, perceptions, and experiences of parturients undergoing CS with regional anesthesia. While aligning with some previous findings, our results also highlight unique perspectives and challenges faced by new mothers, underscoring the need for comprehensive preoperative education, postpartum support, and strategies to address potential conflicts between clinical guidance and societal expectations.

Conclusion

The present study elucidates the parturients' prioritization of neonatal wellbeing over personal discomfort, while simultaneously highlighting their experiences of fear, anxiety, and postoperative pain associated with regional anesthesia and cesarean section delivery. These findings underscore the imperative need to incorporate comprehensive education regarding regional anesthesia, postoperative care, and coping strategies for women undergoing CS. Such initiatives could serve as a benchmark for enhancing the parturient experience and potentially mitigating the risk of postpartum depression.

The study also emphasizes the necessity of addressing the escalating CS rates and promoting normal vaginal delivery when medically appropriate. However, it is crucial to acknowledge that CS can be a life-saving intervention for both the mother and the neonate in certain circumstances. The overarching objective should be to ensure that CS is performed judiciously based on medical necessity, while supporting optimal outcomes for women and infants, with maternal and neonatal safety being the paramount consideration in decisions regarding delivery methods.

Limitations

While this study offers some initial qualitative insights, the small sample size of participants limits the ability to fully capture the subjective experiences following cesarean birth. Furthermore, the use of snowball referrals to recruit participants runs the risk of inherent biases that may restrict diversity and randomness within the sample.

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Conflicts of interest

There are no conflicts of interest.

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