RESEARCH ARTICLE

Women's participation in decision-making for the type of anaesthesia for childbirth: A qualitative study in Pakistan

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Abstract

Objective: To explore women's participation in decision-making related to the type of anaesthesia for elective caesarean section.

Method: The exploratory, descriptive qualitative study was conducted from June to August 2021 and comprised women aged at least 18 years who were either planned for elective caesarean section or had undergone elective caesarean section at a tertiary care hospital in Islamabad, Pakistan, and a secondary care hospital in the mountainous northern areas of the country. was triangulated via semi-structured interviews and observations. Data was subjected to manual content analysis, and codes were assigned based on manifest and latent information. The codes were merged to form categories, and a theme was extracted after repeated reflection on the categories.

Results: Of the 20 women with age ranging 25-38 years, 11(55%) were from the secondary care hospital, and 9(45%) were from the tertiary care hospitals. Overall, 11(55%) women received general anaesthesia and 9(45%) received spinal anaesthesia. Data saturation was achieved in the 14th interview 14 (70%) and the remaining 6(30%) subjects were observed by the researchers. Content analysis led to four categories: initiation of discussion about anaesthesia, quality of discussion about anaesthesia, opportunity for patients' input in the decision, and factors influencing the decision. The categories led to the generation of an overarching theme: ensure the norms; follow the commands.

Conclusion: The decision regarding the choice of anaesthesia for caesarean sections was usually in line with the hospitals' unwritten standards, which were either aligned with evidence-based medical practice, or the availability and competence of anaesthesiologists. Women were usually the recipients of information by the anaesthesiologists.

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Introduction

Caesarean section (CS) is the most common life-saving childbirth delivery method.[1] CS can be performed as an elective or emergency procedure based on the maternal and foetal condition.[1] While different modes of anaesthesia, such as general or regional, including spinal and epidural, can be used for CSs, global literature strongly recommends the use of spinal anaesthesia (SA).[2-6]

Several studies have evaluated the risks and benefits of different types of anaesthesia on the health of both the mother and the child. General anaesthesia (GA) is used for emergency CSs as well when other methods of anaesthesia are contraindicated.[7] However, some maternal risks are associated with GA that include failed intubation, postoperative pain leading to increased patients' demand for analgesia as well as heavy intraoperative bleeding.[2-10] In addition, GA is associated with poor neonatal Appearance-Pulse-Grimace-Activity-Respiration (APGAR) scores and foetal acidosis.[2,5]

Compared to GA, epidural anaesthesia (EA) is considered safe for neonates in terms of good APGAR scores.[4,5] However, the placement of an epidural catheter for 12-24 hours after the operation is discomforting for the mothers. Moreover, the neurological recovery of mothers after EA is late compared to SA.[11]

In EA and SA, mothers can witness childbirth, and be aware of the entire childbirth process.[3] Compared to GA, EA and SA allow the mother an early initiation of breastfeeding as the mother is physically capable of early interaction with the child as opposed to GA cases where the mother remains unconscious for several hours after the operation.

Moreover, SA is associated with numerous advantages, including reduced intraoperative bleeding, less postoperative pain and decreased analgesic requirement, quick recovery and shorter hospitalisation.[2-10] These advantages ultimately contribute to the mother's and child's quality of life (QOL). Given the maternal and neonatal benefits of SA, it is considered the safest and the

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most globally approved method of anaesthesia for CSs.[2-10]

Given the risk-benefit ratio of each mode of anaesthesia, the selection of the type of anaesthesia is very crucial. Decision regarding the type of anaesthesia can be influenced by various factors, including preference of anaesthesiologists and gynaecologists, availability of anaesthesia services, the competence of anaesthesiologists, and mutual consensus of the patient and the relevant medical team.[1] Graff et al. asserted that the anaesthesia selection process is a shared decision-making (SDM) process between the patient and the anaesthesiologist.[12] Therefore, it necessitates clear communication between the anaesthesiologist and the patient pertinent to the risk-benefit evaluation.

Contrary to the worldwide advocacy for the use of SA, the standardised practice of SA for CSs is inconsistent in Pakistan. While researchers have reported higher prevalence of SA used for CSs in tertiary care hospitals,[13,14] no study, to our knowledge, has been conducted in secondary care hospitals. However, an operation theatre (OT) nurse, who was part of the current study, has observed that GA is more commonly used for CSs in secondary care hospitals.

Active involvement of patients with regards to decision-making about the type of anaesthesia for CSs is of critical importance, but the matter has largely remained unexplored in national and international literature. The current study was planned to fill the gap in literature by exploring women's participation in decision-making related to the type of anaesthesia for elective CS.

Subjects and Methods

The exploratory, descriptive qualitative study was conducted from June to August 2021 and comprised women aged at least 18 years who were either planned for elective CS or had undergone elective CS at a tertiary care hospital in Islamabad, Pakistan, and a secondary care hospital in the mountainous northern areas of the country. The subjects speak either the local or the national language. Women who had emergency CS, had a complicated pregnancy, had a recorded neurological or psychiatric disorder, and who were contraindicated for any type of anaesthesia were excluded. The number of elective CSs ranged 70-80 per month in the tertiary care hospital. and 20-40 per month in the secondary care hospital. In the tertiary care hospital, the preferred mode was SA, while in the secondary care hospital, GA was the preferred mode of anaesthesia for elective CS. The contrasting combination of these settings were selected to develop insight about the phenomenon of interest.

Purposive sampling technique was used to select the participants. Efforts were made to have variations in their age, occupation, education and parity. Data saturation guided the selection of participants for data collection through observation and semi-structured interviews. Data saturation has been described as a process involving sampling "until no new information is obtained and redundancy is achieved".[15]

After approval (IRB#129-21) from the Institutional Review Board and Ethics Committee (IRB & EC) of Shifa Tameer-e-Millat University (STMU), permission for data collection was taken from the study settings. For the interviews, the participants were recruited while they were in the two hospitals after their CS. A list of post-CS women were obtained from the head nurses of the obstetric units. After obtaining the list, women' record files were studied to obtain data regarding the nature of CS and the type of anaesthesia used. Pre-anaesthesia notes were used to identify whether any mode of anaesthesia was contraindicated. Women who met the inclusion criteria were approached for participation through the head nurses. Written informed consent was obtained from all the subjects.

Data was collected through semi-structured interview as well as observing the process of women' consultation with the obstetricians and anaesthesiologists. The interviews were conducted face-to-face using a semi-structured interview guide that was developed based on literature review, [2-14] and was translated into Urdu. The guide was trial-tested on one participant to ensure that language of the questions elicited appropriate responses.

The post-CS participants were interviewed when they were waiting for the completion of formalities related to hospital discharge. However, it was ensured that they were pain-free at the time of interview. Open-ended questions in the interview guide were asked with planned and unplanned probes. Moreover, field notes were taken to observe the participants' non-verbal gestures. The participants were allowed to respond in a language of their comfort from among Urdu, the national language, Khowar, the local language, and English. The research team having command over the three languages interviewed all the participants. Each interview lasted 17-32 minutes. at the end of the interview, a pamphlet indicating the advantages and disadvantages of SA and GA was handed to the participants.

The interviews were tape-recorded, and were transcribed verbatim before translation into English for analysis and reporting purposes.

Once data saturation was achieved in the interview process, the remaining subjects were observed by the researchers. The observations were carried out to

understand the process of decision-making for the type of anaesthesia when women were visiting the clinic for their final antenatal check-up. Verbal consent was taken by the obstetricians and anaesthesiologists for observations. With the approval of obstetricians, the assigned nurses in clinics identified the patients who were due for their last antenatal check-up. A researcher stayed in the obstetric clinic, and, if the obstetricians directed these patients for anaesthesia consultation or admission for CS, these patients were shadowed for the anaesthesia selection process.

An observation guide was used to observe the process. The researcher observed the process and asked questions when clarification was required.[16] Field notes were taken and a reflective log was kept during the entire process.

In order to achieve data triangulation, the entire dataset was subjected to manual content analysis following the steps recommended in literature.[16] Codes were assigned based on manifest and latent information. The codes were merged together to form categories. A theme was extracted after repeated reflection on the categories. Coding was done independently by two researchers, while categories and theme were finalised based on consensus among all the researchers. To ensure rigour of the study, a known criterion of trustworthiness was followed.[17]

Results

Of the 20 women with age ranging 25-38 years, 11(55%) were from the secondary care hospital, 9(45%) were from the tertiary care hospital, 14(70%) were housewives, 12(60%) had studies up to post-graduation level, and 15(75%%) were residents of urban areas (Table 2). For 2(10%) women, it was their first childbirth experience. Overall, 11(55%) women received GA and 9(45%) received SA.

Data saturation was achieved in the 14th interview (70%), and the remaining 6(30%) subjects were observed by the researchers. In the observation stage, the secondary care hospital was denoted as setting A, while the tertiary care hospital was denoted as setting B. Setting A observations were assigned serial numbers 1-3, while the remaining three from setting B were assigned serial numbers 4-6. In setting A, three anaesthesiologists were serving; 1(33.3%) full-time and 2(66.6%) part-time. Anaesthesia consultation was done in the preoperative suite for elective CS cases, while emergency CS patients were directly taken from the labour room to the OT without anaesthesia consultation. In setting B, the anaesthesia consultation for elective CS cases took place at two points. First, the patient consulted the anaesthesiologist in the outpatient anaesthesia clinic on the last antenatal follow-up visit. Second, once the patient was admitted in the hospital for CS, a medical officer from the Anaesthesia Department visited to assess the patient for anaesthesia fitness (Table 3).

On the basis of the data collected through the interviews, four categories were formed, leading the to generation of and overall theme; ensure the norms; follow the commands (Table 4).

The first category was 'initiation of discussion about anaesthesia. The discussion about anaesthesia was either led by the healthcare provider or the patients themselves. The healthcare providers included obstetricians, anaesthesiologists, nurses, or any combination of these medical professionals who were involved in the initial discussion with patients related to anaesthesia. However, in setting B, all anaesthesia-related discussions were initiated by healthcare providers, whereas in the setting A, the discussion about anaesthesia was not initiated until the patient inquired. Participants from the setting B clearly verbalised that once the decision for the CS was made, the

Table-1: Measures to ensure rigour of the study.

Criterion	Description
Credibility& Dependability	Interviews and observations were used for the triangulation of data. Interview guide was trial tested to elicit to ensure the wordings of the questions elicit appropriate responses of the participants. Transcripts were verified with recordings before analysis. Data was coded by the first and third author independently. The second author was requested to audit the coding and analysis of the data. Theme and categories were finalized based on consensus of all authors..
Conformability	Data was manually transcribed in local/national/mixed languages before translating to English to ensure the congruency about accuracy, relevancy or meaning of data.
Transferability	The sufficient details and limitations of the study are given. Study settings and participants' characteristics are detailed.
Authenticity	Every step of research process was audited by all authors and possible details of the research methodology are given.

Table-2: Characteristics of the participants.

Characteristics	n
Age (years)	
25-30	7
31-35	9
≥36	4
Occupation	
Housewives	14
Professionals	6
Education	
Uneducated	1
Matriculation	2
Intermediate	1
Bachelor	4
Masters	12
Residency	
Urban	15
Rural	5

Table-3: List of observations by the researchers..

S.No.	Characteristics	Information provided by Obstetrician	Patient response & outcome	Information provided by Anaesthesiologist	Patient response and outcome
1.	Age: 27 Years Education: MCom G2P1	1. Date and time of C-section 2. Instruction for nothing per oral (NPO) and lab investigations before procedure	Patient demanded for SA due to her previous experience. The obstetrician assured the patient that her concern will be communicated to the anaesthesiologist.	Anaesthesiologist acknowledged that he was informed of her preference for SA. He said, "I would try my best but in the event of an unsuccessful SA attempt, GA will be given, as both are equally safe"	After two unsuccessful attempts of SA, the patient was informed that GA would now be given. The patient adamantly refused for GA and insisted her husband should be told about this. Accordingly, her husband was informed that since two SA attempts failed, so she would be given GA. Her husband who was doctor by profession said "I am no in favour of GA" and suggested to call another anaesthesiologist whom he knew. His request was approved and the patient received SA.
2.	Age:32 Years Education: FA G3P2+0	Same process as above	The type of anaesthesia was neither discussed by the obstetrician; nor asked by the patient	1. inquired about the patient's NPO status and dentures 2. No information related to anaesthesia was provided by anaesthesiologist; nor asked by the patient.	The anaesthesiologist did not consider the option of SA and chose to use GA.
3.	Age:34 Years Uneducated G4P3+0	Same process as above	Same process as above	Same process as above	Same process as above
4.	Age:28Years Education: Masters G2P1+0	Laboratory investigations and an anaesthesia consultation before C-section	Same process as above	obtained past medical and surgical information from the patient and informed her that SA will be given for the C-section	The patient informed the anaesthesiologist that she would prefer to have GA, as she did not have a good experience with SA in the past. The anaesthesiologist explained the risks associated with GA and communicated to her that SA will be given.
5.	Age:25 Years Education: MSc in Physics G2P1+0	Same process as above	Same process as above	Inquired about her past history and type of anaesthesia used for her previous C-section.	The patient said SA was given for her previous C-section. The anaesthesiologist agreed that SA will be given for this C-section as well, as it is safe for mother and baby
6.	Age:38 Years Education: Matric G4P3+0	Same process as above	Same process as above	informed her that SA will be given for the C-section	The anaesthesiologist did not provide information about the advantages, disadvantages, or alternate options of anaesthesia; nor did the patient ask

C-Section: Caesarean section, SA: Spinal anaesthesia, GA: General anaesthesia.

Table-4: Theme and categories.

Theme	Categories
Ensure the norms; follow the commands	Initiation of discussion about anaesthesia Quality of discussion about anaesthesia Opportunity for patients' input in the decision Factors influencing the decision

obstetricians referred them to the anaesthesiologists for guidance with regards to the type of anaesthesia. "*As far as I remember I did not have a talk about anaesthesia with the obstetrician. When CS was decided, the obstetrician sent me to the anaesthesia doctor for final observation and check-up.*" (P1)

However, most of the participants in setting A inquired from their obstetricians about the type of anaesthesia on their last antenatal visit when the decision for CS was made. "*Two to three days before the CS, I had an appointment with my obstetrician. During that meeting, I asked her how you anaesthetise your patients [type of anaesthesia]. She responded: 'General and spinal anaesthesia are used, and both are safe.*" (P7)

The second category was 'quality of discussion about anaesthesia'. Concurrent with the observation of the researchers, the participants also reported that the anaesthesia consultation was brief. The discussion focused on the requirements for anaesthesia, including confirming from the patients about their relevant laboratory investigations, dentures and nothing per oral (NPO) status. The information usually did not include elaboration of the types of anaesthesia and their advantages and disadvantages unless a woman asked for it. The women were not inquired about their choice of anaesthesia, or the reasons for what they were going to receive. "*The anaesthesiologist did not tell us about other ways of anaesthesia. I was only told that an injection will be given in the spine for CS. I was not given any option, so I accepted it. This process was the same in my three CSs; no information about options.*" (P3)

One of the patients also emphasised the importance of details required by women to understand the advantages and disadvantages of the type of anaesthesia and to make an informed choice. "*When I requested for full anaesthesia, the anaesthesiologist told me that full anaesthesia is risky for the baby. Hmm! I was not aware of such medical terms, like what risk? Even if there was a risk, he should have counselled me about the possible risk. Information was not provided, nor*

was counselling done about the pros and cons of half and full anaesthesia." (P1)

The third category was 'opportunity for patients' input in the decision'. It was generally not mandatory to invite women's input in the decision for the type of anaesthesia unless they inquired. Moreover, their preferences were not necessarily respected, if they were not aligned with the prevalent practices of the hospitals. Although some women trusted the decision of obstetricians and anaesthesiologists for the type of anaesthesia they were to receive, a few participants from the both settings regretted that they ended up receiving the type of anaesthesia against their wishes. One woman from the setting B said she wanted to go for GA because of her previous experience with SA which was not that good. "*I wanted to take full anaesthesia [GA], but even this time, it was half anaesthesia [SA]. To my recall, when the obstetrician advised for an anaesthesia consultation, even the anaesthesiologist did not tell me or give me any options. They just decided on their own.*" (P1)

Likewise, another woman from setting A shared that her previous experience with GA in emergency CS was not good, and she preferred to go for SA as her current elective CS, but she was counselled to receive GA. "*I discussed with my obstetrician about my preference towards SA, on the day when CS was decided. But when I went to OT, the anaesthesiologist told me that 'you are short-heighted and spinal [anaesthesia] may not have a good effect, and that if it fails, then ultimately they will have to give me GA, so it was better if I went ahead with GA.*" (P8)

The final category was 'factors influencing the decision'. With regards to the factors which influenced the decision for the type of anaesthesia, the main factor was the anaesthesia protocol adopted by the hospitals. "*I had heard from my colleague that backache is more common after SA. So, when I got admitted for CS in the obstetric ward, I communicated to the nurse that, if both options are available, then I will opt for GA. Can you please convey my preference for GA to the anaesthesiologist? She responded, 'In our hospital, only GA is used for CSs". When I went to the OT, neither they inquired me about anaesthesia nor did I ask, but I was given full anaesthesia.*" (P13, setting A)

"*During anaesthesia consultation, the anaesthesia doctor told me that SA will be given for the CS. But when I went to the OT, due to the overwhelming environment of OT, I requested for GA, then the anaesthesia doctor told me that 'GA has a long recovery time, and SA has a quick recovery time'. After that explanation, I accepted the decision and was given SA.*" (P2, setting B)

Of the 20 participants, whether interviewed or observed, only 7(35%) demonstrated some know-how about the type of anaesthesia which was either based on their own past experience, or on the information gathered from friends or family. Therefore, they inquired about the type of anaesthesia, but, irrespective of their inquiry, they had to accept the explanation that was provided to them, and which was mainly aligned with the hospital protocol for anaesthesia.

Additionally, the quality of information provided was one of the main factors. Most participants pointed out that the information related to the anaesthesia was either not provided, or was not enough to make a decision based on the given information.

Discussion

The current study clearly indicates that anaesthesiologists play a key role in deciding the type of anaesthesia for CS. In setting B, SA was the standard practice for CSs, unless it was contraindicated for the woman, or she refused to provide consent for it. In contrast, GA was the norm for CSs in setting A. This practice was either based on evidence-based practice or the anaesthesiologists' competence. However, both the settings did not have a written policy for their preferred mode of anaesthesia for CSs.

The standard practice of setting B was apparently aligned with the international recommendations for SA.[2-11] However, a potential explanation for the use of GA in setting A could be the lack of competence of the anaesthesiologists. This assertion could be supported by the fact that the part-time anaesthesiologists who were competent in both types of anaesthesia were comfortable in administering SA, whenever a woman asked for it. Whereas, the full-time anaesthesiologists always went for GA without asking about the woman's choice. Interestingly, when an educated woman did not want to go for GA, the anaesthesiologist thoroughly explained the potential risks associated with SA while downplaying its benefits.

This finding of the current study is concurrent with the existing literature, which suggests that the competence of anaesthesiologists is of critical importance. Anaesthesiologists should be aware of the evidence-based practices, but should also be competent in administering both types of anaesthesia to be able to honour women's preferences and their safety. Particularly, safe administration of SA requires more competence, because if it is wrongly administered, it can have devastating effects, like paralysis. If SA fails, the anaesthesiologist should be able to save the mother and the foetus through the other type of anaesthesia.[18] In addition to the technical competence of the anaesthesiologists, their counselling and communication skills, as well as ethical integrity, are of critical importance. These attributes are required to help the patients make informed decisions for the safety of both

the mother and the baby.[19-21]

Obstetricians in the current study were less involved in initiating a discussion regarding the type of anaesthesia. In setting B, obstetricians referred the patients to anaesthesiologists for anaesthesia consultation a week before their surgery, whereas in setting A, anaesthesiologists met the patients in operation suite just before their surgery. However, irrespective of the time of meeting, the focus of anaesthesia consultation was on obtaining medical and surgical information from the patient and communicating the type of anaesthesia that a woman is expected to receive. Anaesthesia consultation a week before the surgery and having a clear discussion about the type of anaesthesia could be helpful. Because educated women can either check themselves or have discussion with other woman regarding the pros and cons of each type of anaesthesia, and also be mentally prepared for what to expect.

Patients' counselling about the types of anaesthesia and their pros and cons was not a standard practice by healthcare providers, including obstetricians, nurses and anaesthesiologists. Most of the women only relied on what they were told. But some of the women, who were educated or had prior experience and awareness, inquired about the type of anaesthesia. However, they received close-ended replies. When a woman desires to seek information, a full explanation is essential, and it should be consistent with evidence-based practices rather than the anaesthesiologists' preferences. However, the proposed practice cannot be materialised without the commitment of the hospitals' management. Once they have the commitment to honour the patients' preferences, they will ensure the capacity building of their staff through ongoing education and training.

The current study revealed that women were not routinely involved in decision-making for the type of anaesthesia. They were only recipients of the selected information. Even if they asked questions, answers were provided in a closed-ended manner, which did not encourage them to assert their autonomy or empowered them to furnish an informed consent. Key components of informed consent include providing detailed information about potential risks and benefits of anaesthesia, respecting the patients' autonomy, and avoiding deception or coercion.[21] In line with this explanation of informed consent, some women in the current study, too, expressed their desire to be informed, inquired and involved in the decision-making process for the type of anaesthesia. Although not specially focussing on women, the lack of SDM between patients and their anaesthesiologists was also reported in a study in the United States.[12] A few women in this study learned that there is more than one type of anaesthesia used for CSs. This awareness should be given, particularly counselling about SA, as it has more benefits. Such education and counselling can be provided by the obstetricians or nurses in the obstetric clinics during antenatal visits. In this way, the woman can be prepared for anaesthesia consultation ahead of time. However, the provision of detailed information and quality counselling necessitates concentrated time. In concurrence with the suggestion of several studies, various patient education tools, such as brochures, videos, option grids and written pamphlets, containing concise and relevant information about types of anaesthesia and their advantages and disadvantages can be given to patients in their last trimester when CS is decided.[22] Thus, having had the knowledge related to anaesthesia, women would be able to actively participate in the discussion and ask questions, resulting in their better cooperation and satisfaction. Consequently, they could be empowered to make an effective decision and provide informed consent.

Interventional studies reported that comprehensive information, quality counselling regarding the types of anaesthesia, their advantages and disadvantages, and opportunity to ask questions or engage in mutual discussion, enabled women to choose SA for their elective CS.[23] Implementation of these recommendations could be a challenge in an environment where women are less educated and shy about asking questions.

Although not surprising, the current study found that the participants' ability to ask a question or seek the required information was greatly influenced by their level of education, sociocultural status, past experience, and awareness. Abbas et al. explained that in Pakistan, women's decision-making capacity is closely associated with their level of empowerment, which is highly influenced by their socioeconomic status and awareness.[24] Therefore, the healthcare professionals should keep this explanation in mind while dealing with women having low literacy and low socioeconomic status if they aim for SDM.

The current study has limitations. Although women with various levels of education were included, completely uneducated participants could not be recruited. On the other hand, relatively well-educated women were able to understand, comprehend and articulate their viewpoints clearly to the researcher. Thus, the current findings may not represent the views of completely uneducated women.

Conclusion

On the basis of observations and interviews, it is clear that both the hospitals were predominantly following either GA or SA based on the organisational expectations, availability and competencies of the anaesthesiologists. Moreover, obstetricians were mainly relying on the availability of

anaesthesiologists. Although the consent form for anaesthesia was signed by either the women or her husband, the spirit of an informed consent was not followed. For an informed consent, women must be provided information regarding the types of anaesthesia as well as their advantages and disadvantages. In case of time constrains, nurses can educate women through pamphlet or video ahead of a time, followed by an opportunity to the women to discuss the matter with nurses, obstetricians or anaesthesiologists, as required.

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