Original Article

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Patient Satisfaction with Anaesthesia: Perioperative Questionnaire versus Face-to-face Survey

Anaesthesia Section

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ABSTRACT

Introduction: Factors favouring patient satisfaction in anaesthesia are availability of services based on Institutional facilities, mutual between with anaesthesiologist and patients, skill of healthcare experts and patient requirements. When one wishes to improve response rates and raise the calibre of the data captured, face-to-face surveys are among the greatest methods for gathering data. It can be challenging to quantify subject satisfaction in anaesthesia, since subjective indications vary by person, culture and background. Patients rating of their own satisfaction can estimate the care given during procedure, which cannot be easily assessed in any other way.

Aim: To assess patient satisfaction regarding the care provided during anaesthesia and to find out whether dissatisfactions are better elicited through face-to-face interviews or questionnaire.

Materials and Methods: This cross-sectional study was conducted on patients undergoing surgery under general or regional anaesthesia at Sri Devaraj Urs Medical College, Sri Devaraj Urs Academy of Higher Education and Research, Tamaka, Kolar, Karnataka, India, from November 2021 to February 2022. Estimated sample size was 74. As per American Society of Anaesthesiologist (ASA) grades 1 and 2, adults in the age group of 18–65 years were divided into two groups using chits. In group A, face-to-face interview was done on postoperative day 2 by anaesthesiology resident. In group B, questionnaire was given on postoperative day 2 by anaesthesiology resident. The questions on anaesthesia-related dissatisfaction were posed in a semi-dichotomous scale (no/yes-mild, moderate, severe); the questions on satisfaction with anaesthesia care were given on a 4-item scale (extremely satisfied/satisfied/neutral/dissatisfied). The data was analysed by using Statistical Package for the Social Sciences (SPSS) software version 22.0, and R environment version 3.2.2 and Microsoft word and Excel have been used to generate graphs and tables.

Results: Patient population included in study was 74, among which 63 (85.1%) patients were extremely satisfied with the care given by Anaesthesia Department in general, 7 (9.5%) were satisfied, 4 (5.4%) were neutral, and no one were dissatisfied. Among questionnaire group 36 (97.3%) patients were extremely satisfied with anaesthesia care in general, while 27 (73%) of face-to-face group were extremely satisfied with anaesthesia care in general. Among anaesthesia related dissatisfactions 65 (87.8%) of patients did not complain of postoperative nausea and vomiting. In the present study, 52 (70.3%) patients were extremely satisfied with pain relief after surgery.

Conclusion: Face-to-face interview identifies more patients who report lower degree of satisfaction with anaesthesia, it can be concluded that, interviewing is better suited for detecting quality problems with anaesthesia care than written questionnaire.

Keywords: American society of anaesthesiologist, Interview, Patient care, Patient gratification

INTRODUCTION

Patient satisfaction is an indicator of the security and quality of services provided by healthcare team. It incorporates a comprehensive approach to determine, how well the patient's perceptions about the quality provided by healthcare provider have been met [1]. Patient satisfaction is dependent on a variety of aspects, like service availability and convenience, which are influenced by Institutional facilities, interpersonal connections, technical skill of healthcare providers, patient expectations and preferences. Due to the intricate nature of satisfaction, questionnaires should include numerous items to evaluate certain events. The design of a patient satisfaction questionnaire demands a gradual psychometric strategy and confirmation in reality [2]. There are many ways to estimate patient care and satisfaction, including postoperative visits and questionnaires. Face-to-face surveys improve response rate and raise the caliber of data captured. Face-to-face surveys being frequently used to gather data for projects that are assumed to be accurate [3].

Patients rating of their own satisfaction can estimate the care given during procedure which cannot be easily assessed in any other way. It improves and deepens the relationship between the patient and the anaesthesiologist as well as the standard of anaesthesia care given to the patient. Patients mostly have problems in analysing the quality of anaesthesia care independently from the overall care during treatment. Cultural and socio-economic factors are known to influence patient satisfaction [4]. The significance of quality control in the operating theatre, including anaesthesia care should not be compromised. The perioperative patient care system can be enhanced by ensuring patient safety, employing techniques that can strengthen clinical decisions in the operating theatre, and applying innovative techniques for minimising perioperative complications [5].

One of the main components of patient satisfaction is improving communication skills with the patients. It measures the relevance of the information given, may reduce patient anxiety while rising patient satisfaction and so enhances the quality of the service [6]. Only few researches have been conducted regarding patient satisfaction with the anaesthesia care using questionnaire and face-to-face surveys in India. Therefore, the present study was aimed to assess patient satisfaction and dissatisfactions with anaesthesia care in general. The secondary objective was to assess the level of patient satisfaction regarding the care provided during anaesthesia using questionnaire and face-to-face interview.

MATERIALS AND METHODS

This cross-sectional study was conducted in the Department of Anaesthesiology at Sri Devaraj Urs Medical College, Sri Devaraj

Urs Academy of Higher Education and Research, Tamaka, Kolar, Karnataka, India, from November 2021 to February 2022. Approval from the Institutional Ethics and Scientific Committee was obtained (DMC/KLR/IEC/369/2021-22 dated 30/09/2021). Written informed consent was obtained from all the patients.

Inclusion criteria: Adults in the age group of 18-65 years undergoing elective surgery under general or regional anaesthesia, under physical status American Society of Anaesthesiologist (ASA) grade I and II were included in the study [7].

Exclusion criteria: Patients with associated head injury, psychiatric patients, terminally ill, patients not willing to take part in the study were excluded from the study.

Sample size calculation: The sample size was calculated using the proportion of people who were very satisfied with the anaesthesia department (74%), as reported in a survey by Bauer M et al., considering an alpha error of 10% with 95% confidence interval [8]. The sample size estimated was 74.

$$n=\frac{Z^2_{\alpha/2}P(1-P)}{E^2}$$

z-1.96

P-74 E-10

Z- Standard normal distribution for the desired confidence interval.

n- Sample size

P- Prevalence

E- Error

Study Procedure

Detailed preanaesthetic assessment of all patients was done on the previous day. Patients were clearly explained about the regional and general anaesthesia procedures. Subjects were nil per oral for six hours before procedure. Ranitidine150 mg was given to patient two hours before shifting to operation theatre and after shifting, intravenous line was secured, monitors attached and baseline vital parameters were recorded. Warmer was attached to prevent hypothermia. Intraoperatively patients were stabilised either under regional or general anaesthesia. Patients were shifted to post anaesthesia recovery room and were assessed on postoperative day 2. Same set of questions were included in both groups. All the 74 patients were allocated into two groups based using chits.

Group A: Resident from Department of Anaesthesiology asked anaesthesia care related questions on postoperative day 2. Patients responded to surveys conducted in-person (face-to-face) based on their observations. Resident filled questionnaire based on replies given by patient. After completing proforma containing questionnaire, handed over to Anaesthesiology Department.

Group B: Questionnaires form was directly given to patients either in English or native language based on their preference on postoperative day 2 by anaesthesiology resident. Patients were asked to fill the questionnaire and give it back to corresponding ward nurse in their wards. After completing proforma containing questionnaire, ward nurse handed over proforma to Anaesthesiology Department.

Questionnaire

The questionnaire involved information on age, sex, education, satisfaction and dissatisfaction regarding anaesthesia care. Questionnaire was created to gauge patient satisfaction and unhappiness with anaesthetic services overall. The Bauer's patient satisfaction questionnaire's questions were revised based on Indian standards [8]. Modified questionnaire was made after discussing with all authors. Senior faculty who helped in formulating questionnaire had >15 years of experience in the Department of Anaesthesiology. A pilot study was conducted among 10 patients using modified questionnaire. Since the results of the pilot study were appropriate, the main study was executed.

The questionnaire contained two aspects of the anaesthesia care in general. The first aspect was patient satisfaction with anaesthesia care. A set of 10 questions were designed for the assessment of satisfaction with anaesthesia care and the responses were evaluated on a 4-item scale with reponses recorded as extremely satisfied, satisfied, neutral and dissatisfied. The 4-item scale was revised from Bauer questionnaire [8]. Patient was asked to reply for questions based on their satisfaction level.

The second aspect of the questionnaire assessed dissatisfactions with anaesthesia care in general. Another set of 10 questions were designed for the assessment of dissatisfaction with anaesthesia care. The questions on anaesthesia-related dissatisfaction were posed in a semi-dichotomous scale (no/yes-mild, moderate, severe). If a patient had complaints of dissatisfaction, it was classified into mild, moderate and severe using revised Bauer questionnaire [8]. Mild, moderate, severe was used to access the grade of dissatisfaction. For example, if patients complained of postoperative nausea and vomiting. If the patient had only nausea, then considered mild. If the patient had nausea and single episode of vomiting graded as moderate. If the patient had nausea with more than one episode of vomiting its graded as severe. Similarly other dissatisfaction questions were classified into mild, moderate and severe. Patient himself was asked to grade into mild, moderate and severe based on dissatisfaction. If the patient did not complain of dissatisfaction, it was marked "no" in the questionnaire.

STATISTICAL ANALYSIS

Descriptive and inferential statistical analysis has been carried out in the present study. Results on continuous measurements were presented on mean±Standard Deviation (SD) and results on categorical measurements were presented as frequency and percentages. Significance is assessed at 5% level of significance. Student's t-test has been used to find the significance of study parameters on continuous scale between two groups on metric parameters. Chi-square/Fisher's-exact test has been used to find the significance of study parameters on categorical scale between two or more groups, non parametric setting for qualitative data analysis. Fisher's-exact test used when cell samples are very small. Statistical Package for the Social Sciences (SPSS) software version 22.0 and R environment version 3.2.2 were used for the analysis of the data and Microsoft word and Excel have been used to generate graphs, tables, etc.

RESULTS

The study had included 74 patients and all of them had given feedback completely regarding patient satisfaction and dissatisfactions towards anaesthesia care in general in both groups. Clarity and a good response rate were ensured by the way the questions were formulated. Age, sex, anaesthesia technique, patient satisfaction and dissatisfactions were all comparable across the two groups. Face-to-face group had 18 females and 19 males and among questionnaire group 19 females and 18 males were present. [Table/Fig-1] depicts gender and educational status of both the groups.

Variable	Group A (n=37) n (%)	Group B (n=37) n (%)	Total N (%)	p-value
Gender				
Female	18 (48.6)	19 (51.4)	37 (50)	1.000*
Male	19 (51.4)	18 (48.6)	37 (50)	
Education status				
1st to 7th grade	3 (8.1)	6 (16.2)	9 (12.2)	0.087+
8th to 10th	6 (16.2)	11 (29.7)	17 (23)	
11th to 12th	9 (24.3)	11 (29.7)	20 (27)	
Degree	15 (40.5)	9 (24.3)	24 (32.4)	
Postgraduate degree	4 (10.9%)	0	4 (5.4%)	

Age group (years)				
<30	13 (35.1)	12 (32.4)	25 (33.8)	0.966¥
30-40	15 (40.5)	12 (32.4)	27 (36.5)	
41-50	6 (16.2)	11 (29.7)	17 (23)	
>50	3 (8.1)	2 (5.4)	5 (6.8)	
Total	37 (100)	37 (100)	74 (100)	
Mean±SD	35.59±11.34	35.48±10.16	35.54±10.69	

[Table/Fig-1]: Gender, education and age frequency distribution of patients in two groups studied.
*Chi-square test; +Fisher's-exact test; ¥Student's t-test-age

Most of the patients were educated and able to participate in the study genuinely. Group A had more literates with degree qualification compared to Group B and in both the groups, overall, 24 (32.4%) subjects had a degree qualification.

On comparison of age distribution, 15 patients from group A and 12 patients from group B belongs to 30-40 years age group as shown in [Table/Fig-1]. Patients were able to freely express their emotions. Group A had younger participant comparing with group B. Patients were able to express their emotion freely and also able to establish good rapport with anaesthesiologist.

A series of 10 questions were used to determine subjects' satisfaction with anaesthesia in both groups, as indicated in [Table/Fig-2,3]. About 79.7% expressed extremely satisfied with the anaesthesiologist-patient relationship. None of the patients were dissatisfied you with the information you were given by the anaesthesiologist during pre-anaesthetic evaluation. About 70.3% of group A and 89.2% of group B were extremely satisfied with information given by anaesthesiologist preoperatively. It demonstrates that all patients received thorough preoperative explanations of the operation and anaesthesia protocols. In group A, 64.9% were extremely satisfied with temperature control inside theatre while 89.2% of questionnaire group were extremely satisfied with temperature control inside theatre. There was a significant difference between two groups with p-value <0.05. It emphasises that, group A expressed less satisfaction and they were able to freely express their opinions. Immediately after surgery, 60.8% of patients expressed extreme satisfaction with anaesthesia care. Only 3% of patients were dissatisfied with postoperative evaluation by anaesthesiologist signifies that, they were happy with care and treatment done during procedure as shown in [Table/Fig-2].

Satisfaction with anaesthesia	Group A n (%)	Group B n (%)	Total N (%)	p-value
How satisfied were you with the information you were given by the anaesthesiologist during preanaesthetic evaluation?				
Dissatisfied	0	0	0	0.155
Extremely satisfied	26 (70.3)	33 (89.2)	59 (79.7)	
Satisfied	6 (16.2)	2 (5.4)	8 (10.8)	
Neutral	5 (13.5)	2 (5.4)	7 (9.5)	
How satisfied were you with relationship maintained by anaesthesiologist?				
Dissatisfied	2 (5.4)	1 (2.7)	3 (4.1)	0.460
Extremely satisfied	27 (73)	32 (86.5)	59 (79.7)	
Satisfied	4 (10.8)	3 (8.1)	7 (9.5)	
Neutral	4 (10.8)	1 (2.7)	5 (6.8)	
How satisfied were you with the care given by the anaesthesiologist during postoperative evaluation?				
Dissatisfied	1 (2.7)	1 (2.7)	2 (2.7)	<0.001**
Extremely satisfied	19 (51.4)	35 (94.6)	54 (73)	
Satisfied	13 (35.1)	1 (2.7)	14 (18.9)	
Neutral	4 (10.8)	0	4 (5.4)	
How satisfied were you immediately after the surgery?				
Dissatisfied	0	1 (2.7)	1 (1.4)	<0.001**
Extremely satisfied	11 (29.7)	34 (91.9)	45 (60.8)	
Satisfied	17 (45.9)	2 (5.4)	19 (25.7)	
Neutral	9 (24.3)	0	9 (12.2)	
How satisfied were you with temperature control inside theatre?				
Dissatisfied	2 (5.4)	2 (5.4)	4 (5.4)	0.034*
Extremely satisfied	24 (64.9)	33 (89.2)	57 (77)	
Satisfied	9 (24.3)	2 (5.4)	11 (14.9)	
Neutral	2 (5.4)	0	2 (2.7)	

[Table/Fig-2]: Satisfaction with anaesthesia.
*p-value <0.05 was considered statistically significant (Chi-square test; Fischer's-exact test when cell samples <5)

Among all patients, 93.2% of patients wants to prefer the same anaesthesiologist. They were satisfied with behaviour and care given by anaesthesiologist. Among patient population 85.1% were extremely satisfied with the care given by Anaesthesia Department in general, 9.5% were satisfied, 5.4% were neutral and no one was dissatisfied with p-value of 0.011. Among questionnaire group, 97.3% were extremely satisfied with anaesthesia care in general while 73% of group A were extremely satisfied with anaesthesia care in general as in [Table/Fig-3].

Satisfaction with anaesthesia	Group A n (%)	Group B n (%)	Total N (%)	p-value
How satisfied were you with safety features provided during surgery?				
Dissatisfied	0	1 (2.7)	1 (1.4)	0.015*
Extremely satisfied	24 (64.9)	33 (89.2)	57 (77)	
Satisfied	9 (24.3)	2 (5.4)	11 (14.9)	
Neutral	4 (10.8)	1 (2.7)	5 (6.8)	
How satisfied have you been with pain relief after surgery?				
Dissatisfied	3 (8.1)	2 (5.4)	5 (6.8)	0.067+
Extremely satisfied	21 (56.8)	31 (83.8)	52 (70.3)	
Satisfied	8 (21.6)	2 (5.4)	10 (13.5)	
Neutral	5 (13.5)	2 (5.4)	7 (9.5)	
How satisfied were you with management of nausea and vomiting after the operation?				
Dissatisfied	2 (5.4)	2 (5.4)	4 (5.4)	0.098+
Extremely satisfied	25 (67.6)	24 (64.9)	49 (66.2)	
Satisfied	7 (18.9)	11 (29.7)	18 (24.3)	
Neutral	3 (8.1)	0	3 (4.1)	
Would you prefer the same anaesthetist to someone else?				
Do not think so	0	1 (2.7)	1 (1.4)	1.00
May be yes	1 (2.7)	0	1 (1.4)	
Unsure	2 (5.4)	1 (2.7)	3 (4.1)	
Yes	34 (91.9)	35 (94.6)	69 (93.2)	
How satisfied were you with the care given by the Department of Anaesthesia in general?				
Dissatisfied	0	0	0	0.011*
Extremely satisfied	27 (73)	36 (97.3)	63 (85.1)	
Satisfied	6 (16.2)	1 (2.7)	7 (9.5)	
Neutral	4 (10.8)	0	4 (5.4)	
Total	37 (100)	37 (100)	74 (100)	

[Table/Fig-3]: Satisfaction with anaesthesia.
*Chi-square test used, whenever cell samples are less than 5 +Fisher's-exact test, significant (p-value ≤0.05)

Anaesthesia related dissatisfactions are assessed using 10 questions as shown in [Table/Fig-4,5]. Of total, 87.8% of patients who experienced anaesthesia related dissatisfactions did not report experiencing postoperative nausea and vomiting. Postoperative nausea and vomiting was reported by 12.2% of patients [Table/Fig-4]. About 2.7% of group B experienced headache following surgery, whereas 21.6% of the group A experienced headaches. In group A, 16% of people complained of being drowsy and none of the patients in group B reported feeling drowsy.

Anaesthesia related dissatisfaction	Group A n (%)	Group B n (%)	Total N (%)	p-value
Postoperative Nausea and Vomiting (PONV)				
No	31 (83.8)	34 (91.9)	65 (87.8)	0.475
Yes	6 (16.2)	3 (8.1)	9 (12.2)	
• Mild	2 (5.4)	2 (5.4)	4 (5.4)	
• Moderate	4 (10.8)	0	4 (5.4)	
• Severe	0	1 (2.7)	1 (1.4)	
Headache				
No	29 (78.4)	36 (97.3)	65 (87.8)	0.032*
Yes	8 (21.6)	1 (2.7)	9 (12.2)	
• Mild	5 (13.5)	1 (2.7)	6 (8.1)	
• Moderate	3 (8.1)	0	3 (4.1)	
• Severe	0	0	0	
Drowsiness				
No	31 (83.8)	37 (100%)	68 (91.9%)	0.036*
Yes	6 (16.2)	0	6 (8.1)	
• Mild	5 (13.5)	0	5 (6.8)	
• Moderate	1 (2.7)	0	1 (1.3%)	
• Severe	0	0	0	

[Table/Fig-4]: Anaesthesia related dissatisfaction regarding postoperative nausea, vomiting, headache and drowsiness in both groups.
*p-value <0.05 was considered statistically significant (Chi-square test; Fischer's-exact test when cell samples <5)

Anaesthesia related dissatisfaction	Group A n (%)	Group B n (%)	Total N (%)	p-value
Cough				
No	31 (83.8)	37 (100)	68 (91.9)	0.033*
Yes	6 (16.2)	0	6 (8.1)	
Mild	6 (16.2)	0	6 (8.1)	
Moderate	0	0	0	
Severe	0	0	0	
Breathing difficulty				
No	34 (91.9)	35 (94.6)	69 (93.2)	1.000
Yes	3 (8.1)	2 (5.4)	5 (6.8)	
Mild	1 (2.7)	1 (2.7)	2 (2.7)	
Moderate	2 (5.4)	0	2 (2.7)	
Severe	0	1 (2.7)	1 (1.4)	
Shivering				
No	35 (94.6)	37 (100)	72 (97.3)	0.493
Yes	2 (5.4)	0	2 (2.7)	
Mild	1 (2.7)	0	1 (1.4)	
Moderate	1 (2.7)	0	1 (1.4)	
Severe	0	0	0	

[Table/Fig-5]: Anaesthesia related dissatisfaction regarding postoperative cough, breathing difficulty and shivering in both groups.
*p-value <0.05 was considered statistically significant (Chi-square test; Fischer's-exact test when cell samples <5)

In group A 16% of participants complained of coughing, while none of the respondents to the group B complained of coughing. A p-value of 0.033 suggests a significant difference between group A and B. In group A, 92% patients did not experience breathing difficulty and in group B 95% did not experience breathing difficulty. There was no significant difference between two groups.

Pain at surgical site was complained by 24% of subjects in group A, while none of the subjects in group B as in [Table/Fig-6]. 22% of group A patient's experienced anxiety during procedure, while none of the questionnaire group experienced anxiety. Face-to-face group were able to freely express than questionnaire group.

Anaesthesia related dissatisfaction	Group A n (%)	Group B n (%)	Total N (%)	p-value
Pain at surgical site				
No	28 (75.7)	37 (100)	65 (87.8)	<0.001**
Yes	9 (24.3)	0	9 (12.2)	
• Mild	4 (10.8)	0	4 (5.4)	
• Moderate	5 (13.5)	0	5 (6.8)	
• Severe	0	0	0	
Thirst				
No	36 (97.3)	37 (100)	73 (98.6)	1.000
Yes	1 (2.7)	0	1 (1.4)	
• Mild	1 (2.7)	0	1 (1.4)	
• Moderate	0	0	0	
• Severe	0	0	0	
Anxiety				
No	29 (78.4)	37 (100)	66 (89.2)	0.005**
Yes	8 (21.6)	0	8 (10.8)	
• Mild	6 (16.2)	0	6 (8.1)	
• Moderate	2 (5.4)	0	2 (2.7)	
• Severe	0	0	0	
Cognitive defects				
No	37 (100)	36 (97.3)	73 (98.6)	1.000
Yes	0	1 (2.7)	1 (1.4)	
• Mild	0	0	0	
• Moderate	0	0	0	
• Severe	0	1 (2.7)	1 (1.4)	
Total	37 (100)	37 (100)	74 (100)	

[Table/Fig-6]: Anaesthesia related dissatisfaction regarding postoperative pain at surgical site, thirst, anxiety and cognitive defects in both groups.
*p-value <0.05 was considered statistically significant (Chi-square test; Fischer's-exact test when cell samples <5)

DISCUSSION

Patient satisfaction has been described as the distinction between patients' prior expectations and their later perceptions of the healthcare services they received. As a result, an ideal measure of patient satisfaction can provide unique feedback on the quality of practice for medical fields such as anaesthesia. In the study questionnaire and face-to-face surveys were used to access patient satisfaction and dissatisfactions towards anaesthesia care. The current study results revealed that pain at the site of surgery (12.2%), thirst (1.4%), postoperative nausea and vomiting, headache, and pain at the site of surgery were the common dissatisfactions suggested by patients. In a study done by Chalasani SH et al., about 37.3% complained of pain at the site of surgery and 23.30% complained of thirst. More patients complained of pain at the site of surgery in their study [1]. In a study done by Ahmad I et al., shivering was noted in 7.9% patients. In the current study, 2.7% of patients complained of shivering. Only few patients complained regarding shivering in both the studies [2]. In a study done by Suresh P and Mukherjee A, patients who underwent regional anaesthesia were more satisfied with pain relief and less incidence postoperative nausea and vomiting and similar results were observed in the present study [3].

In the current study, 85.1% were extremely satisfied with the care given by Anaesthesia Department in general. Satisfaction levels were comparatively good. In a study done by Andemeskel YM et al., overall satisfaction level of the patients with perioperative anaesthesia care at the described sites was 68.8% [6]. In the present study, 70.3% of participants were very satisfied with the pain relief following surgery, while 12.2% of people reported pain at the surgery site afterward. Authors were able to methodically handle pain at the surgery site. Only 12.2% of patients in the

present study, reported having headaches following surgery, 93.2% of patients say they would like to see the same anaesthesiologist again. They were pleased with the anaesthesiologist's conduct and attention. Postoperative drowsiness was the main complaint. In a study by Bauer M et al., 80% of patients reported feeling sleepy after anaesthesia, however, in the indexed study, only 8.1% of the population reported feeling sleepy following treatment. In the indexed study by Bauer M et al., 15% of the participants mentioned shivering and 6% of all patients reported having severe shivering [8]. Only 5.4% of face to face participants in the current study reported postoperative shivering. None of the patients expressed concerns about acute shivering.

According to a study by Bauer M et al., interviews were more effective than written questionnaires for analysing anaesthetic care quality issues [8]. In the indexed study, face-to-face survey elicited more patients who report lower levels of satisfaction with anaesthesia. They were able to freely express opinions. About 16.2% of group A patients complained of cough while none of the patients from group B complained of cough. In group A 21.6% of patients complained of anxiety, while none of the patients from group B complained of anxiety. Hence face-to-face survey is more effective in identifying quality issues with anaesthesia care than written questionnaires. In a study done by Bauer M et al., face-to-face survey were better in identifying patients with low degree of satisfaction [8].

Patients rating of their own satisfaction can estimate the care given during procedure which cannot be easily assessed in any other way. In a study done by Bauer M et al., patient rated satisfaction and dissatisfaction towards anaesthesia through scoring system. In the present study also, patients rated satisfaction and dissatisfaction towards anaesthesia care through scoring system. Patients were able to freely express their feeling towards anaesthesia perioperative care in general [8]. In a survey conducted by Gebremedhn EG et al., 90.4% of patients said they were satisfied with the anaesthesia services they had received, whereas in the present study, 79.7% of participants were extremely satisfied with the relationship mainatained by anaesthesiologist [9]. In a study done by Singh A et al., male uneducated patients had expressed dissatisfaction towards anaesthesia care. Female educated patients were more satisfied [10]. The present study could not find a significant difference in satisfaction level between educated and uneducated patients.

In a study done by Droog W et al., 79.8% patients reported being extremely satisfied with their anaesthesia care in general. In the indexed study, 85.1% patients were extremely satisfied with anaesthesia care in general [11]. In studies done by Tosuner AV et al., and Gaszynski T et al., providing adequate preoperative information to the patient about regional anaesthesia increased overall satisfaction and will assure the patient feels safe during the perioperative period. In the current study also, proper preoperative information was given to patients regarding anaesthesia [12,13]. The perioperative result would be strongly influenced by the quality of the anaesthetic services provided [14,15]. In the current study, authors were able to assess the factors which affects the patient satisfaction towards perioperative anaesthesia care. Current study had considered validity, standard, internal consistency, reliability and practicability, when creating highly standardised questionnaires. Rather than using a universal averaged score, the assessment which utilises averaged scores for the aspects is more enlightening.

Limitation(s)

The study did not differentiate between regional and general anaesthesia, accessed only patients' perspective towards anaesthesia care in general.

CONCLUSION(S)

Interviewing specific problems identified more patients, who report lower levels of satisfaction with anaesthesia. Face-to-face survey is more effective in identifying quality issues with anaesthesia care, than written questionnaires. Therefore, a face-to-face survey would let the Institutions to highlight the variables that influence patient satisfaction and safety-related problems.

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Patient satisfaction with anaesthesia: perioperative questionnaire versus face-to-face survey

Age:

Gender:

Surgery underwent:

Type of Anaesthesia given:

Educational status:

Questionnaire/Face-to-face group:

Satisfaction with Anaesthesia

1. How satisfied were you with the information you were given by the anaesthesiologist during pre-anaesthetic evaluation?

Extremely satisfied ☐ satisfied ☐ neutral ☐ dissatisfied ☐

2. How satisfied were you with relationship maintained by anaesthesiologist?

Extremely satisfied ☐ satisfied ☐ neutral ☐ dissatisfied ☐

3 How satisfied were you with the care given by the anaesthesiologist during postoperative evaluation

Extremely satisfied ☐ satisfied ☐ neutral ☐ dissatisfied ☐

4. How satisfied were you immediately after the surgery?

Extremely satisfied ☐ satisfied ☐ neutral ☐ dissatisfied ☐

5. How satisfied were you with temperature control inside theatre?

Extremely satisfied ☐ satisfied ☐ neutral ☐ dissatisfied ☐

6. How satisfied were you with safety features provided during surgery?

Extremely satisfied ☐ satisfied ☐ neutral ☐ dissatisfied ☐

7. How satisfied have you been with pain relief after surgery?

Extremely satisfied ☐ satisfied ☐ neutral ☐ dissatisfied ☐

8. How satisfied were you with management of nausea and vomiting after the operation?

Extremely satisfied ☐ satisfied ☐ neutral ☐ dissatisfied ☐

9. Would you prefer the same anesthetist to someone else?

yes ☐ may be, yes ☐ unsure ☐ don't think so ☐

10. How satisfied were you with the care given by the department of anaesthesia in general?

Extremely satisfied ☐ satisfied ☐ neutral ☐ dissatisfied ☐

Anaesthesia related dissatisfaction

S. No.	Dissatisfaction	No	Yes (Mild)	Yes (Moderate)	Yes (Severe)
1	PONV				
2	Headache				
3	Drowsiness				
4	Cough				
5	Breathing difficulty				
6	Shivering				
7	Pain at surgical site				
8	Thirst				
9	Anxiety				
10	Cognitive defects				