

Research Article

Patient satisfaction with anesthesia care services and associated factors in AHQ Hospital Bajaur Agency, KP, Pakistan

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Abstract

Patient satisfaction is the balance between expectation and perception of what is received. It is an important component and quality indicator in anesthesia care services. It can be affected by Anesthetist patient interaction, peri-operative anesthesia management, and post-procedure follow-up. There is no previous study conducted in our institute. This study aimed to assess the level of patient satisfaction with anesthesia care services and to determine the factors that affect patient satisfaction. Two hundred and sixty-three patients were selected among scheduled patients for a surgical procedure under different types of anesthesia were surveyed. The standardized questionnaire was used for post-operative patient interviews. Data was entered and analyzed through the Statistical Package for Social Science (SPSS) version 22. Overall, the proportion of patient satisfaction with anesthesia care services was 76%. Of these, educated were less satisfied (43.5%) compared with non-educated (56.5%). Factors that affect patient satisfaction negatively are sore throat, shivering, peri-operative pain, nausea, and vomiting. Patient's satisfaction with anesthesia care services was low in our institute with previously many published studies. Factors that affect patient satisfaction negatively may be preventable and every health care provider should work on these factors to decrease dissatisfaction level. Awareness creation about the current problem and training need to be given for anesthetists.

Keywords: Anesthesia Care Services; Awareness; Peri-Operative care; Patient Satisfaction

Introduction

Satisfaction is a subjective feeling about the gratification of a desire, need, or the degree of congruence between expectations and

accomplishment. While talking about patient satisfaction commonly allude to how well the patient surmises about the medical care services have been me [1]. To measure the

degree of patient satisfaction different tools are used such as post-operative visit and through Questionnaire [2, 3]. The development of a patient-satisfaction tool needs a stepwise psychometric process and confirmation in practice, and due to the complex nature of satisfaction, questionnaires should use multiple items to examine specific events [4]. The actual standard of care that sufficiently exceeds this expectation can change a patient's initially negative judgment to a positive one. but simply, patient satisfaction depends on the comparison between what is expected by the patient and what happens to the patient [2, 5]. Different factors contribute to patient satisfaction including accessibility and convenience of services that depend upon institutional structures, interpersonal relationships, competence of health professionals, and patient expectations and preferences [6].

Mediocre anesthesia services may discourage patients from using accessible services. Because of human concern, health concerns are most important [7]. During pre-operative and intra-operative it is very difficult to measure patients' satisfaction [8, 9]. Quality of anesthesia is closely related to the incidences of pain, nausea and vomiting, and overall experience during the recovery period after the surgical process. Measurement of such attributes and parameters requires confirmation-based support in the form of objective scales along with subjective perceptions tested based on multiple dimensions by the primary assessor [10, 11]. A study revealed that patients how are scheduled for the surgical procedure under general anesthesia and local anesthesia are (87%) satisfied with anesthesia care services and 0.5%, 12.5% are unsatisfied and with no opinion respectively [12]. Another study concludes that among surgical patients 54.1% of patients coming in the category of less than 80% satisfied patients. Most

importantly educated, American Society of anesthesiologist I II and female patients are less satisfied [7].

From a study conducted in Saudi Arab, correlate the dissatisfaction with post-operative nausea, poor control of post-operative pain, and severe dynamic pain. But overall satisfaction level was high (95.2%) and unsatisfied was (4.8%) [1]. A study done in Australia revealed that patient satisfaction level was high (96.8%) and low-level unsatisfied patients were (2.3%) and a strong level of unsatisfied was (0.9%) [13]. The satisfaction level is higher in males compared to females and in general anesthesia than regional anesthesia among the Japanese population in the age of 20 to 39 years. The dissatisfaction level is (3.9%) [14]. The process of assessing quality indicators and anesthesia outcomes is highly challenging and problematic in repetitive daily practice. In one of the systematic reviews, 108 quality indicators have been recognized and the common of them are considered to possibly affect the quality of anesthesia services. The remaining ones are also supportive of measuring surgical and post-operative care [15]. According to British anesthetist perception patient satisfaction with anesthesia care and personal care was significantly high with a single post-procedure visit compared with no visit at all [16]. Among Taiwan People responded with high satisfaction levels toward anesthesia care, personal care, waiting for operation theater, anesthesia staff attitude, and postoperative complication management [17].

A study was conducted at the University of Gondar hospital conclude that patient satisfaction with anesthesia care services was low compared with previously published literature. The major factor that contributes to inpatient satisfaction inclusive awareness, and proper training to anesthetists [18]. The patient's point of view remains the best way

to measure patient satisfaction with anesthesia services [19]. In Asmara, Eritrea's population moderate level of satisfaction (68.8%) was observed. Satisfaction level correlated with cooperative anesthesia staff, fair relationship with patients at the time of the procedure, and less fair (87.5%) in patients [20]. Surgical patients require multiple factors to measure patient satisfaction. In the Australian population anesthesia care, satisfaction is high and cite different factor that could contribute to the dissatisfaction of patients [21].

The most common factor that contributes to patient satisfaction is the management of postoperative pain management, extubating period, nausea, and vomiting concluded by a study in Katihar [22].

A study demonstrates that involving a patient in the decision has a great role in patient satisfaction with anesthesia services [23].

Materials and Methods

Study design, duration and setting

This cross-sectional study was carried out from July 2016 to December 2016, at the department of anesthesia, at Agency Head Quarter Hospital (AHQ) Bajaur agency. Patients admitted to the AHQ and schedule for any surgical procedure involving both regional and general anesthesia were considered for our study.

Sample technique, inclusion, and exclusion criteria

Consecutive (Non-Probability) sampling was used and all those patients who had fulfilled our inclusion criteria were selected. A pre-tested questionnaire was used for data collection.

Ethical approval and procedure

The questionnaire translated verbally into the native language. Pre-test questionnaire was done on 30 patients in other hospital and some correction was made after data collection. Patients scheduled for elective surgical procedures were visited post-operatively, in their respective wards, after

Among the Greek population anesthesia care services satisfaction level lies in (96.3%-98.6%) [24].

If patient satisfaction can truly help to monitor the excellence of anesthesia care, a better measure of patient satisfaction that has recognized consistency and validity is needed. we attempt to lay the base for the creation of such a measure for anesthesia. We first review the method of patient satisfaction quantification and discuss the insufficiencies of existing measures in the anesthesia. We then framework the early important considerations distinctive to the setting of anesthesia that supports and monitors the construction of a more reliable and valid patient satisfaction questionnaire for anesthesia care.

In addition, hopefully, this study will be helpful as a footstep for the next research to be done in a similar area

24 hours of their operation. After explaining the aim of the study informed content was taken. Data collection is based on socio-demographic characteristics. The statistical tool used for data analysis was SPSS version 22. Mean and the standard deviation was calculated for numerical data and nominal data frequencies and percentages.

Results

Total of 263 patients scheduled for the surgical procedure under general anesthesia and regional anesthesia with a total satisfaction response rate of (76%) during the study period. In most subjects (155) were male, including 113 patients who were educated. Among educated patients, 87 (43.5) were satisfied with anesthesia care services and 26 (41.26) were not satisfied. Of these 150 patients were non-educated. In non-educated patients 113 (56.5) were satisfied and 37 (58.73) were not satisfied. Among most of the study subject, 155 (76.7%) are shown in (Table 1 & 2).

Of these 155 (58.93%) were males and 108 (41.06) were female. Patients scheduled for

minor surgery were 113 (43%) and 150 (57%) were admitted for major surgery. From these patients, 175 (66%) were in ASA Class I, and 33 (33.46%) in ASA class II are shown in (Table 3).

In total 263 pre-operative assessments were done in 257 (97.7%) by consultant anesthetists. Anesthetist's approach was considered good by participating in 230 (87%). And Patients with a chance to choose the type of surgery in elective surgery were 76 (28%). And 158 (60%) of respondents have a chance to ask questions and 105 (40%) were deprived to ask questions are shown in (Table 4).

It was noted in 25(9.5%) patients in which 6(24%) participants are satisfied and 19(76%) are not satisfied. And in 238 participants 175(73.5%) were satisfied and 63(26.4%) were unsatisfied. Shivering is noted in 21(7.9%) patients in which 2(9.5%) were satisfied and 19(90.4%). no shivering

was noted in 243 participants, in which 63 were unsatisfied. Sore throat noted in 30 (11.4%) patients in which 11(36.6%) were satisfied and 19(63.3%) were unsatisfied, while in remaining patients 63 were unsatisfied and 170 were satisfied.

Out of 263 patients, 53 (20%) of patients were suffering from pre-operative pain while remaining were stable. A very few patients come with complain of intra-operative pain 20 (7.6%). After post-operation visit 82 (31%) patients complain of pain after procedure these data are shown in (Table 5). Of these 175 participating post-operative complications inclusive sore throat was reported in 11 satisfied patients and in unsatisfied 19 patients were reported. As above shivering in satisfied patients is 02 and 19 in the previous one. Nausea and vomiting (06) and (19) were reported in satisfied and in unsatisfied respectively shown in (Table 6).

Table 1. Educational status and Satisfaction

Count		Educational Status		Total
		Educated	Non-Educated	
Level of Satisfaction	yes	87	113	200
	No	26	37	63
Total		113	150	263

Table 2. Satisfaction Level and Gender

Count		Sex		Total
		Male	Female	
Level of Satisfaction	yes	119	81	200
	no	36	27	63
Total		155	108	263

Table 3. Different characteristics of study participants

S. No.	Characteristic	Frequency	Percentage
Gender			
1	Male	155	58.93%
2	Female	108	41.06%
Type of Surgery			
3	Minor Surgery	113	43%
4	Major surgery	150	57%
ASA Status			
5	ASA I	175	66%
6	ASA II	88	33.46%

Table 4. Patients assessment, Anesthesia approach, and other related information

S. No.	Factor	Frequency	Percentage %
1	Pre-operative assessment		
	Yes	257	97.71%
	No	6	2.28%
2	Anesthetists Approach		
	Good	230	87%
	Bad	33	12.54%
3	Patient well to choose the type of anesthesia		
	Yes	76	28.29%
	No	187	71.1%
4	Anesthesia-related information		
	Yes	158	60%
	No	105	40%

Table 5. Pain assessment pre, intra-operative, and post-operative

S. No.	Factor	Frequency	Percentage %	Tolerable pain (Satisfied)	Un tolerable Pain (Unsatisfied)
1	Pain during Induction				
	Yes	53	20%	21 (39.6%)	32 (60.3%)
	No	210	79.8%	165 (78.5%)	45 (21.5%)
2	Intra-operative Pain				
	Yes	20	7.6%		
	No	243	92.4%		
5	Post-operative Pain				
	Yes	82	31%		
	No	181	68%		

Table 6. Post-operative complications among satisfied and unsatisfied patients

Satisfaction		Sore Throat		Shivering		Nausea and Vomiting	
		Yes	No	Yes	No	Yes	No
Yes	181	11	170	02	179	6	175
No	82	19	63	19	63	19	63

Discussion

Peri-operative pain release and management have a significant role in consideration of the level of patient happiness and satisfaction with anesthesia care services in hospitals [25]. Overall, studies with patient satisfaction with anesthesia care services have a positive result as like in our study. This study aimed to find patient satisfaction with anesthesia care services and related factors. The finding of this study revealed the overall percentage

of patient's satisfaction with anesthesia care services is 76% which is similar to a study done in Asmara, Eritrea with overall satisfaction percentage of 68.8% and 75% with staff-patient relation satisfaction [20]. Different studies with a similar questionnaire were published in Rwanda and Saudi Arabia. Patient satisfaction (61.9%) was a little small than our study. And slightly less in Rwanda (67.3%) [26, 27]. Baroudi *et al.* revealed that satisfaction level was less in females

compared to males. And educated patients were less satisfied than uneducated. Over all, satisfaction was less than (85%) [7].

A study in Ethiopia concluded the overall satisfaction (65%) with the pre-operative period. A clinical audit showed that pre-operative patient satisfaction is low. This could be inadequate information about anesthesia and their side effect [28]. The dimension of satisfaction explains about anesthesia, hospital stay, surgery, and their anesthesia complication. That's why overall, the satisfaction score was less than (45%). This less satisfaction score is related to inadequate information provided to patients especially information related to anesthesia, their side effects, and complication [28, 29]. A study done at Sohag University revealed that Inadequate pre-operative information and guidance will also the cause of dissatisfaction [27]. A study concludes that different factor which negatively affects the patient satisfaction level inclusive pain, cold, shortness of breath (SOB), nausea, and vomiting. Overall, the patient satisfaction proportion was 88.3% [30].

Peri-operative surgical information has a high impact on patient satisfaction. A study reported that peri-operative surgical services have 98% patient satisfaction. Health professional needs to emphasize peri-operative information and guidance as, like surgical information, anesthesia-related communication, and guidance can improve the patient satisfaction of anesthesia care services [31,32]. The involvement of parturient in choice of anesthesia is a contributing factor for patient satisfaction with anesthesia care services. A study concludes that the lowest satisfaction was recorded with pre-operative services (17%) and overall, maternal satisfaction (88%) was associated with spinal anesthesia [33].

To increase patient satisfaction with anesthesia care services and decrease anxiety level train anesthetists should consult and

exchange information with patients pre-operatively [34]. Our study finding was low when compared with Caljouw *et al.* [20] (92%) and Jjala *et al.* [29] (90%). This score was high when compared with Rwanda's study percentage (57%) of patient satisfaction [20].

In this study, there is a very less difference level of satisfaction between educated and un-educated patients. But female patients were less satisfied compared with male patients. After analysis of multivariable the main predictor of patient satisfaction anesthetist pre-operative assessment and anesthetic approach. The weakness noticed in this study was the patient's well to choose the type of anesthesia and question answering related to anesthesia. Among dissatisfied patients, the dissatisfaction is because of different factors like sore throat, peri-operative Pain, Shivering, Nausea, and Vomiting. Most patients afraid of hospital stay long hospital stay and waiting time.

Conclusion

This study concludes that the overall level of patient satisfaction with peri-operative anesthesia care is 76%. The presence of preoperative and postoperative complications leads to dissatisfaction with anesthesia care. While explaining the risk and benefit of anesthetic techniques to patients, patient opinion is very important while deciding the type of anesthesia. Patients describe, isa good anesthetic approach and better pre-operative assessment. Different factors associated with dissatisfaction may be preventable.

Authors' contributions

Conceived and designed the experiments: I Ahmad & M Tayyeb, Performed the experiments: E Gohar & I Noor, Analyzed the data: N Rehman & M Tayyeb, Contributed materials/ analysis/ tools: I Ahmad & I Noor, Wrote the paper: I Ahmad, E Gohar, & M Tayyeb.

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