

## Patient Satisfaction with Operation Theatre Services in a Tertiary Care Hospital in South India: A Cross-Sectional Study

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### Abstract

Monitoring of patient satisfaction is routinely done in almost all health care settings as a measure of monitoring quality in delivery of health services. Perioperative patient satisfaction aids in postoperative recovery reduce the need of pain medication and augment patient-health provider relationship. Present study aimed at assessing level of satisfaction in patients towards operation theatre in a tertiary care hospital. *Methods:* Data was collected from 200 subjects who attended the operation theatres of ESIC Medical College Hospital, Kerala. Samples were selected conveniently. Data collection was done using structured questionnaire. Analysis was done employing descriptive and inferential statistics.  $p < 0.05$  was considered as statistically significant. *Results:* Among the study subjects, 56% subjects were highly satisfied with operation theatre services. Significant association was revealed between level of satisfaction and educational status ( $p < 0.05$ ). *Conclusion:* More than half (56%) of the subjects were satisfied with operation theatre services. A high level of satisfaction was found with the operation theatre staff behavior.

**Keywords:** Patient satisfaction; Operation theatre services; Tertiary care hospital.

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### Introduction

Quality in delivery of health care is indispensable, since it deals with human life. It modulates the occurrence of desired health outcome with present information.<sup>1</sup> Level of satisfaction towards available health care services is a vital indicator of quality of care, which contributes to evaluation of structure, process and outcome of services.<sup>2</sup> Components like availability of services, institutional structure, mutual relationships, knowledge and skill of health care professionals and patient's own desires and inclinations add to patient satisfaction.

Numerous studies throws light to the fact that hospital work culture (good nurse to patient ratio, encouraging nurses in decision making and healthy physician-nurse relations) are attributed to good health outcome and improving patient satisfaction. This is in fact related to the significant role of nurses in overall operation of hospitals.<sup>3</sup>

Evaluating patients their opinion of consideration and treatment they have received is a vital process focusing on enhancing the quality of care, to monitor whether hospitals are addressing patients' needs and distinguish potential obstruction for the delivery of health care services.<sup>4</sup> Numerous factors can affect the patient satisfaction with operation theatre services which is really unpredictable. Based on patients' expectation and perceived level of satisfaction with the provided care, patients may choose alternate health care agencies.<sup>5</sup>

It is of utmost importance that a strategy should be established to deliver equitable, easily available and satisfactory treatment to all patients. Patient satisfaction is of great value and is helpful in identifying need of health care seekers. Health care services will be relevant and acceptable if it

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is identifying and meeting the satisfaction level of patients. Literature review of similar articles also suggest the basic satisfaction level assessment is a tool to determine the extent of health care delivery, observing the present situation and deliver a strategy to improve.<sup>6</sup>

### **Objectives**

- To assess the level of satisfaction of patients towards operation theatre services.

### **Materials and Methods**

#### **Research design**

A cross-sectional research design was employed in the present study to determine patient satisfaction towards the operation theatre services. The main purpose of this study was to assess the level of satisfaction in patients after anesthesia and surgery and to identify the factors influencing level of satisfaction/dissatisfaction in patients.

#### **Study area**

Employee's State Insurance Corporation Medical College Hospital, Parippally, Kerala was selected as the study health facility. The study population was derived from the patients attending the operation theatres of ESIC Medical College Hospital, available at the time of data collection.

#### **Reference population**

Patients who attended the operation theatres of ESIC Medical College Hospital were the reference population.

#### **Source population**

Patients who attended the operation theatres of ESIC Medical College Hospital, Parippally and underwent surgery under spinal/epidural or general anesthesia.

#### **Inclusion criteria**

- Patients aged above 15 years.
- Patients who were able to read and write.
- Patients underwent surgery under spinal/epidural or general anesthesia.

#### **Exclusion Criteria**

- Patients who were not willing to participate
- Patients who were mentally challenged

### **Study sample**

Subjects who fulfilled the inclusion criteria were selected conveniently by the investigator.

### **Sampling technique and sample size**

The sample was drawn conveniently from the source population. The sample size calculated was 177 by considering 0.867 proportion of patients satisfied with health services.<sup>7</sup> For improving the precision, data was collected from 200 subjects.

### **Tool for data collection**

The research tool was a structured, self administered questionnaire which was designed by the investigator under the guidance of experts. The questionnaire was translated to Malayalam language which is locally used in the place of study. Validity and reliability of the data collection tool was checked and found satisfactory.

### **Data collection procedure**

- The data collection was done during the months of December 2013 – March 2014.
- Data collection was done in the postoperative surgical wards of ESIC Medical College Hospital Parippally.
- Permission for the study was sought from the respective Head of the Departments and concerned sister in charge was informed regarding the study.
- A survey was conducted in the respective wards for selecting the subjects according to inclusion criteria.
- Written informed consent was obtained from the study subjects.
- Data collection was done using a structured questionnaire developed by investigator after extensive literature review and validated by experts.
- Data was collected from the subject itself.
- Data collection was done by the investigator himself.

### **Ethical considerations**

- Permission was obtained from the competent authority.
- An informed written consent was obtained from each patient involved in the study.
- All the study subjects were informed about their participation in the study, objectives of study and duration of their involvement.

- All the study subjects were given full autonomy to withdraw from the study at any time.
- Anonymity and confidentiality of the subjects were maintained while collecting the data.
- Treatment of the patient did not withhold or altered in any way to facilitate their intake into the study.

### Data analysis

- The retrieved proforma has been put to detailed and scrupulous analysis after entering the raw data into the coding sheets.
- The data was analyzed using both descriptive and inferential statistics.
- Calculation was carried out manually, using a calculator and with the help of Microsoft Excel (2007) and Statistical Package for Social Sciences (SPSS version 16.0 Inc., Chicago, IL).
- Patient's demographic data were estimated as number and percentages for categorical data and means with standard deviation for interval data.
- The analyzed data was presented in the form of tables, graphs and other figures.
- The level of statistical significance was kept at  $p < 0.05$ .
- Interpretation of the findings was done.

### Results

This cross-sectional study was conducted to ascertain the patient satisfaction regarding operation theatre services at ESIC Medical College

Hospital, Parippally, Kerala. Total 200 subjects were provided with questionnaire which was in their local language.

### Socio demographic and related characteristics of the subjects

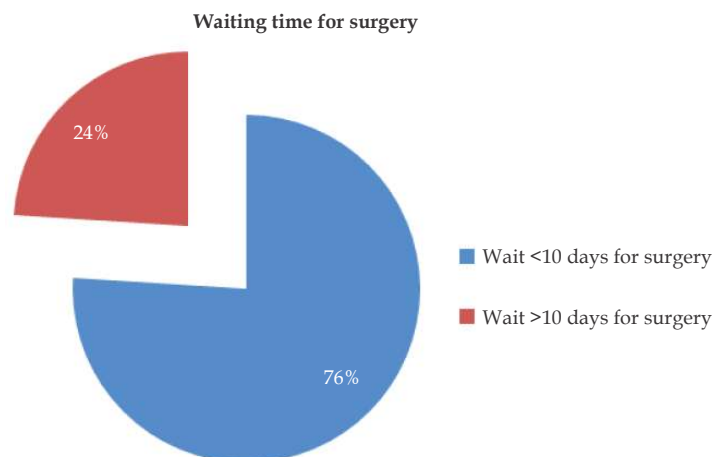
A total of 200 subjects were included for the study. One hundred and four subjects (52%) were males. The mean age of the subjects was  $42.60 \pm 12.78$  years. Male respondents constituted largest group ( $n = 134, 67\%$ ). One hundred and thirty nine subjects out of 200 subjects (69%) were married. Majority of the subjects (86%) were educated up to secondary level. Seventy eight percent of the subjects were employed in private firm. Majority of the subjects ( $n = 156, 78\%$ ) were employed in private firm.

Out of two hundred subjects, 32 (16%) were taken for surgery on emergency basis; whereas the remaining 168 (84%) were taken up for planned surgery. Sixty six (33%) subjects underwent surgery under general anesthesia, forty eight cases (24%) were performed under spinal anesthesia, fifty four (27%) under regional anesthesia and thirty two (16%) under epidural anesthesia.

### Accessibility of subjects to health care services

Accessibility of the subjects towards operation theatre services was measured based on two components viz; waiting time and information received.

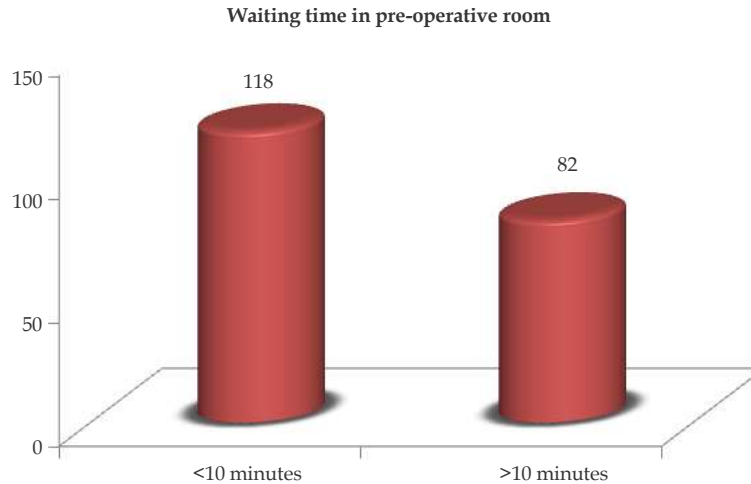
The mean number of days patients had to wait for surgery after completing all investigations and preoperative checkups was  $8.13 \pm 3.70$  days; which ranges from day 0 to a maximum of 18 days. Majority of the subjects (76%) wait less than 10 days for surgery after completing all preliminary investigations and checkups (Fig. 1)  $N = 200$ .



**Fig. 1:** Average number of days the subjects had to wait for surgery after completing all investigations and preoperative checkups.

The time period that the subjects had to wait for attending by a health care professional in preoperative room was also studied in the Fig. 2. Mean time that the subjects had to wait in preoperative room for attending by a health care

professional was  $10.60 \pm 4.04$  minutes; with a range of 1-15 minutes. It was noticed that more than half of the subjects (59%) were attended by health care professional within 10 minutes (Fig. 2)  $N = 200$ .



**Fig. 2:** Mean duration of time (in minutes) that the subjects had to wait in the preoperative room to be attended by a health care professional.

### ***Patient satisfaction towards operation theatre services and postoperative management in wards***

To assess level of patient satisfaction; operation theatre services and postoperative management in wards were taken as indicators. The level of patient satisfaction was measured by a Likert's scale having five grades as 5 = very satisfied, 4 = satisfied, 3 =

neutral, 2 = dissatisfied and 1 = very dissatisfied. The mean score of total satisfaction was 53.17. The score equal and more than mean was considered as high satisfaction and the score less than mean was considered as low satisfaction level. Table 1 depicts the patient response towards operation theatre services and postoperative management in wards.

**Table 1:** Patients response to the questionnaire

$N = 200$

Variables	Level of satisfaction				
	5	4	3	2	1
<b>Operation theatre services</b>					
Did the operation theatre staff understand your situation?	88	92	18	2	0
Politeness of the operation theatre staffs for you?	95	87	4	14	0
The professionalism of the operation theatre staffs?	58	76	0	66	0
The attention of the operation theatre staff to your questions?	102	43	0	55	0
Did the operation theatre staff give attention to your complaint like pain or nausea?	116	78	6	0	0
Did the operation theatre staff treat you kindly?	112	72	16	0	0
Were you confident that the operation theatre staffs were knowledgeable and skilful?	64	72	64	0	0
<b>Postoperative management in wards</b>					
Nurses' provide prompt response for your call?	74	112	0	14	0
Adequacy of ward nurses' information to you about your health progress?	92	86	22	0	0
Adequacy of information provided by ward nurses about the side effects of medications?	61	78	29	32	0
Adequacy of time the ward nurses spent with you during evaluation and treatment?	58	76	38	28	0
Responsibility of the physician for you?	81	76	14	10	19
The communication of the physicians with you in an understandable way?	82	46	16	44	12

5 = Very satisfied, 4 = Satisfied, 3 = Neutral, 2 = Dissatisfied, 1 = Very dissatisfied

**Item wise mean and SD for patient satisfaction with operation theatre services**

As shown in Table 2, satisfaction questions were computed individually to derive mean of each item. It was found out that six of them had mean score more than four.

This shows that patients had relatively higher satisfaction level in most of the parameters. Maximum of the study subjects acknowledged the kind treatment by operation theatre staff (mean 4.48). The lowest mean was 3.63, which indicates professionalism of theatre staff needs to be improved.

**Table 2:** Item wise means and SD for patient satisfaction with operation theatre services

Variables	N = 200	
	Mean	SD
Operation theatre services		
Did the operation theatre staff understand your situation?	4.33	0.61
Politeness of the operation theatre staffs for you?	4.32	0.74
The professionalism of the operation theatre staffs?	3.63	1.22
The attention of the operation theatre staff to your questions?	3.96	1.15
Did the operation theatre staff give attention to your complaint like pain or nausea?	4.47	0.57
Did the operation theatre staff treat you kindly?	4.48	0.44
Were you confident that the operation theatre staffs were knowledgeable and skilful?	3.68	1.26
Postoperative management in wards		
Nurses' provide prompt response for your call?	4.23	0.52
Adequacy of ward nurses' information to you about your health progress?	4.35	0.67
Adequacy of information provided by ward nurses about the side effects of medications?	3.84	1.02
Adequacy of time the ward nurses spent with you during evaluation and treatment?	3.82	1.01
Responsibility of the physician for you?	3.95	1.12
The communication of the physicians with you in an understandable way?	3.71	1.36

**Level of total satisfaction with operation theatre services**

Total satisfaction; as given in Table 3, was computed by categorising it into high satisfied and low satisfied groups. The respondents secured a score of mean or more were considered as highly satisfied while those secured less than the mean score were taken as low satisfied. According to the

output shown in Table 3, more than half of subjects ( $n = 112, 56\%$ ) were highly satisfied. The finding is inconsistent with the study reports of Gebremedhn and Lemma<sup>8</sup> and Jlala et al.<sup>7</sup> which concluded that their satisfaction rate was above 86%. This variation may be due to difference in quality of service provided or difference in expectations of the patients.

**Table 3:** Level of total satisfaction with operation theatre services

N = 200

Satisfaction	Frequency	Percentage
High level of satisfaction (mean and above)	112	56
Low level of satisfaction (less than mean)	88	44
Total satisfaction: Mean = 53.17, SD = 4.12		

**Association between satisfaction and demographic variables**

As outlined in the Table 4, the association between selected socio demographic variables with satisfaction was assessed. No significant association

was found out between age, gender, marital status and occupation with level of satisfaction, where as a significant association was obtained between level of satisfaction with educational qualification ( $p < 0.05$ ).

**Table 4:** Socio demographic factors and patient satisfaction with Operation Theatre services N = 200

Variables	Satisfaction level					Chi-square	p-value
	Low satisfaction		High satisfaction				
	Frequency	percentage	Frequency	percentage			
<b>Age</b>						0.63	0.96
16-25 years	32	14	64	18	36		
26-35 years	32	12	52	20	48		
36-45 years	30	12	55	18	45		
46-55 years	66	28	50	38	50		
>56 years	40	22	55	18	45		
<b>Gender</b>						0.60	0.44
Males	124	56	57	68	43		
Females	76	32	48	44	52		
<b>Marital status</b>						1.34	0.51
Single	50	22	64	28	36		
Married	138	60	51	78	49		
Widow/er	12	6	50	6	50		
<b>Educational status</b>						10.42	0.005*
Primary	59	30	63	29	37		
Secondary	108	54	59	54	41		
Higher education	33	4	14	29	86		
<b>Occupation</b>						2.28	0.13
Not employed	44	20	68	24	32		
Private	156	68	50	88	50		

## Discussion

Waiting time for surgery after completing all investigations was less than 10 days in majority (76%) of subjects. This signifies that case wise importance was given to each patient on timing of patient taken up for surgery. It also contributed towards better satisfaction of patients. Study also revealed that, more than half of the subjects were satisfied with operation theatre services. This finding is in congruent with study finding by Gebreedhn et al.<sup>8</sup> which concluded that majority of the subjects were satisfied with operation theatre service.

## Conclusion

1. More than half (56%) of the subjects were satisfied with operation theatre services.
2. A high level of satisfaction was found with the operation theatre staff behavior.
3. Socio demographic variables except educational qualification did not prove any association with level of satisfaction.

This may be due to the fact that educated people will rationalize the care and facilities available.

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