

# Elective Surgery Patients Satisfaction towards Perioperative Service and its Associated Factors at Amhara region comprehensive Specialized Hospitals of Ethiopia

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## Abstract

**Background:** Patient satisfaction is considered one of the desired outcomes of health care and is directly related to the utilization of health services. Satisfaction with care is vital in determining whether a person seeks medical advice, complies with treatment, and maintains a continuing relationship with health care providers.

**Objective:** The aim of this study was to assess elective surgery patient satisfaction with perioperative service and its associated factors at comprehensive specialized hospitals in the Amhara region, Ethiopia.

**Material and Methods:** A cross-sectional study design was used from April 15 to May 15, 2023 on a sample of 383 elective surgery patients using systematic random sampling technique. Data was collected using structured questionnaire and Data was analyzed by SPSS version 25.

**Results:** The questionnaire was administered to a total of 383 elective surgery patients of which 64% were male, about 23.2%, 62.4% were from the rural residence, and 53.5% of the study subjects had paid for treatment. Overall, elective surgery patients' satisfaction with perioperative service was 62.1%. According to our findings, payment status for treatment ( $p=0.001$ ), patient residence ( $p=0.00$ ), Educational status ( $p=0.000$ ), operated on the agreed date and time ( $p=0.000$ ), and expectation of service ( $P=0.017$ ) were all found to be statistically significant predictors of elective surgery patient satisfaction with perioperative service.

**Conclusion:** Compared to others previous studies, the overall prevalence of elective surgery patients satisfied with perioperative service was good. Elective surgery patient satisfaction with perioperative service was significantly influenced by patient residence, operated on agreed date and time, payment status for treatment, patient expectations for service, and the patient's educational level.

**Keywords:** elective surgery patient, preoperative service, patient satisfaction

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## Introduction

Patient satisfaction is one of the most desired results of healthcare, and effective utilization of health services. Patient satisfaction is an equilibrium between the perception and expectation of perioperative care obtained during hospitalization. It is the perception of care received relative to care anticipated. Patient expectations have a significant impact on patient satisfaction, which is a flexible and subjective concept. Patient satisfaction is also seen as one of the essential results of healthcare and is closely linked to the use of medical services<sup>1,4</sup>.

Patient satisfaction is a challenging concept that mostly depends on the patient's perception. An essential part of health care is perioperative services, which include

preoperative evaluation to identify risk factors associated with anaesthesia, surgery, planning for type of anesthesia, and potential postoperative results<sup>5,8</sup>

Elective surgery patient satisfaction is affected with numerous factors like; waiting time, age, information, the type of surgery, the patient's residence, and the length of their hospital stay. Clinical outcome has a considerable impact on patient satisfaction with perioperative service. Avoiding complications that could lead to a prolonged hospital stay, and a higher risk of morbidity is crucial for the patient's satisfactions<sup>9,10</sup>.

The parameters that influence patient satisfaction with perioperative service following elective surgery are still largely unknown<sup>11</sup>. In order to address and reduce

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patient unhappiness with the perioperative service, it is critical to identify areas of elective surgery patient dissatisfaction. The aim of this study was to assess elective surgery patient satisfaction with perioperative service and its associated factors.

## Material and Method

### Study Design, Area, and period.

Institutional based cross-sectional study was conducted from April 15 to May 15, 2023 at the comprehensive specialized hospitals of Amhara region, Northwest Ethiopia.

Sample size determination and sampling procedure.

sample size was determined using single population proportion formula. In a previous study done in Northshewa general hospitals it was shown that satisfaction rate 64%, 5% degree of freedom and 95% confidence interval.

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

assumptions  $n$  = required sample size,  $Z_{\alpha/2}$  = confidence interval (1.96),  $\alpha$  = Level of confidence,

$d$  = marginal error (5%), and 10% non response rate was added. There for based on the above assumptions 390 respondents were enrolled in this study. systematic random sampling was used to select samples.

Data collection procedures A structured questionnaire was used to collect the data during discharge from the hospital, they were interviewed face-to-face. The questionnaire adapted from a previous study in English, it was translated into Amharic and then retranslated into English to ensure consistency and avoid word or phrase distortions. To assure the quality of the data, training was given to the Five BSC nurses, and one MSc supervisor about the objectives, questionnaires, and interview technique. The preparation of the data collectors and the monitoring of a supervisor preserved the quality of the data. A 5% pretest study was carried out at Woldia comprehensive specialized hospital to evaluate the viability and clarity of the research tool, the chonbachs alpha value were =0.761.

Inclusion and exclusion criteria

### Inclusion criteria

A patient who underwent elective surgical interventions.

### Exclusion Criteria

A patient who was readmitted in the data collection period.

Less than 24 hours of discharge after operation. The patient who was seriously ill or have severe mental health issues at left against or refer to other health institution. The patients who underwent minor surgical interventions.

### Study Variables

Dependent Variables. Elective surgery Patient Satisfaction with **perioperative service**

### Independent Variables

Socio-Demographic Characteristics: Age, sex, occupation, Marital Status; Education level, Income, and

Residence. Clinical Characteristics: Experience with hospitalization, History of co morbid diseases, complications, Type of anesthesia, Length of hospitalization, expectation of service, Types of operation, and Payment status for treatment. Organizational factor: ward or beds cleanliness, Availability medication and investigation finding under hospital, food and water supply, cleanliness bathroom, and cleanliness of latrines. Satisfaction on Five Dimensions: Discomfort and Needs, fear and Concerns, patient –Staff Relation Ship, Service, and Information.

### Operational definitions

Perioperative service: perioperative service consists of preoperative care, intraoperative care, and postoperative care<sup>13</sup>.

**Patient satisfaction:** Patients who scored greater than or equal to the mean or median of perioperative surgical care patient satisfaction's quantitative value were considered satisfied<sup>14</sup>.

**Patient dissatisfaction:** patients who scored less than the mean or median of perioperative surgical care patient satisfaction's quantitative value were considered dissatisfied<sup>14</sup>.

In order to determine the patients' overall satisfaction, the percentage ratings for each dimension were totaled up, and a final mean were computed<sup>14</sup>.

**Data collection Tools.** Surgical patient Satisfaction in Five Dimensions

**Information Provision:** The length of time patients spent in the operating room and the amount of information given to them. There are a total of seven questions.

**Discomfort and Needs:** This component assessed the adverse effects of the anaesthesia, peri operative care which may have an impact on patient satisfaction. Seven questions are used to illustrate it.

**Staff-patient relationship:** It has fourteen components that assess the interaction between patients and hospital staff.

**Fear and Concern:** This variable assessed how anxious and worried patients were about situations. Overall, there are five items.

**Service:** It had seven components that assessed the cost of services, the quality of the procedure, and the quality of interactions.

The scale for discomfort, and need, fear, and concern varied from 5 (not at all), 4 (a little bit), 3 (moderately), 2 (quite a bit), and 1 (very).

The service Six questions Very satisfied(5), satisfied (4), neutral (3), dissatisfied (2), and very dissatisfied and One question measured Yes and NO (operated on the agreed date and time)

Staff-patient relationships, information, and organizational factors are graded as follows: Very satisfied(5), satisfied (4), neutral (3), dissatisfied (2), and very dissatisfied (1).

Data Processing and Analysis. Data clean-up and cross checked were done before analysis. The coded data were entered to Epi data version 4.6 software and exported SPSS version 25. Bivariable and multivariable analysis was performed to determine significantly associated

variables. The cut off statistical significance was < 0.2 and 0.05 for Bivariable and multivariable logistic regression analysis respectively. with adjusted odds ratio at 95% confidence interval.

### Ethical consideration:

This study was conducted after getting ethical clearance from the research review committee on behalf of ERB University of Gondar, College of Medicine and Health Science, with Reg. No. S/N /192/2015. A support letter was obtained from the Department of Surgical Nursing and sent to UoGCSH, TGCSH, and Amhara Regional Public Health Institute. At the individual level, after the purpose of the study is explained and verbal informed consent is obtained from all clients prior to their participation in this study. The client was informed that privacy and confidentiality could be maintained strictly. The information obtained from study clients was kept, and their names were not written down; rather, a code was signed to ensure confidentiality

## Results

### Socio-demographic and clinical Characteristics of Participants

Data were collected from a total of 383 randomly selected participants, with a response rate of 98.2%. The mean age and standard deviation (SD) were 46.13 ± 15.352 years and the age ranged from 19 to 73 years. Eighty-nine (23.2%) of the respondents were in the age group of 38–47. Majority of study subjects, 245 (64%) were male, and more than half of study subjects (67.6%) were married. Based on our study findings subjects (36%) were Farmers. Regarding hospitalization history, 63.4 percent of the participants were at their first visit, and 39 (10.2%) had co-morbid diseases. More than half of the study subjects had paid for treatment (53.5%). Two hundred and fifty-two (65.7%) patients have had general anaesthesia, and most of the study subjects (88.8%) did not develop complications. One hundred and forty-six (38.1%) participants have high expectations of hospital service. Concerning to the length of stay, 177 (46.2%) of the respondents stayed between 10 and 20 days in the ward.

Variables		Frequency	Percentage
Age	18-27	74	19.3
	28-37	46	12
	38-47	89	23.2
	48-57	65	17
	58-67	74	19.3
	>68	35	9.1
Sex	Male	245	64
	Female	138	36
Marital Status	Single	75	19.6
	Married	259	67.6
	Divorced	40	10.4
	Widowed	9	2.3
Occupation	Government Employee	73	19.1
	Unemployed	20	5.2
	Student	22	5.7
	Retired	17	4.4
	Farmer	138	36
	self employed	113	29.5
Residence	Rural	239	62.4
	urban	144	37.6
Payment status for treatment	Health insurance	178	46.5
	Paid	205	53.5
Experience with hospitalization	First visit	243	63.4
	Second visit	116	30.3
	More than two visits	24	6.3
have co-morbid diseases	Yes	39	10.2
	No	344	89.8
Type of anaesthesia	Specific	131	34.2
	General	252	65.8
expectation of service	None	48	12.5
	Low	92	24
	Medium	97	25.3
	High	146	38.1

### Organizational related factors

Two hundred and seventy-five (71.8%) respondents were satisfied with the adequacy of the food and water supply. Whereas the majority of the study subjects (313, or 81.7%) were dissatisfied with the cleanliness of the ward and beds, generally 64.8% of the respondents were satisfied with facility related service.

### Patients' satisfaction dimensions related factors.

#### Information

Three hundred and three (79.11%) of the study participants were satisfied with the amount of information they received about the risks of reoperation and death after surgery.

Questions	Choices									
	Very Satisfied		Satisfied		Not satisfied (Neutra)		Dissatisfied		Very Dissatisfied	
	N	%	N	%	N	%	N	%	N	%
Information provided by health professionals about the risk of PONV and treatment options?	0	0	149	38.9	217	56.7	12	3.1	5	1.3
Information provided by health professionals about the risk of sore throat and treatment options after operation?	1	0.3	142	37.1	219	57.2	16	4.2	5	1.3
Information provided by health professionals about the risk of depression and treatment options after operation?	0	0	178	46.5	194	50.7	8	2.1	3	0.8
Information provided by health professionals about the risk of discomfort and relieving methods after operation?	0	0	205	53.5	169	41.1	5	1.3	4	1
Information provided by health professionals about the risks of hunger and thirst and treatment options after operation	0	0	215	56.1	156	40.7	8	2.1	4	1

Questions	Choices									
	Very Satisfied		Satisfied		3. Not satisfied (neutral)		Dissatisfied		Very Dissatisfied	
	N	%	N	%	N	%	N	%	N	%
Did the staff of the operating theatre center take into account your privacy?	28	7.3	286	74.7	26	6.8	9	2.3	34	8.9
Did you have confidence in staff of the operating theatre center	0	0	352	91.9	22	5.7	9	2.3	0	0
Had the staff of the operating theatre center an open attitude	28	7.3	306	79.9	17	4.4	9	2.3	23	6
Were staffs of the operating theatre center respectful?	25	6.5	305	79.6	22	5.7	12	3.1	19	4.96
Did staff of the operating theatre centre show understand for your situation?	19	5	326	85.1	17	4.4	21	5.5	0	0
Were staffs of the operating theatre center polite?	31	8.1	303	79.1	19	5	12	3.1	18	4.7
Did you find the staff of the operating theatre center professional?	28	7.3	311	81.2	22	5.7	11	2.9	11	2.9
Did staff of the operating theatre center pay attention to your questions?	0	0	239	62.4	118	30.8	26	6.8	0	0
Did staff of the operating theatre center pay attention to complaints like pain and nausea?	31	8.1	119	31.1	60	15.7	140	36.6	33	8.6
Did staff of the operating theatre center take into account personal preferences?	34	8.9	174	45.4	50	13.1	124	32.4	1	0.3
Did staff of the operating theatre center take into account your cultural background	20	5.2	217	56.7	96	25.1	50	13.1	0	0
Did staff of the operating theatre center Knowledgeable?	15	3.9	293	76.5	53	13.8	8	2.1	14	3.7
Did staff of the operating theatre center pay attention to you as an individual?	22	5.7	311	81.2	32	8.4	8	2.1	10	2.6
Were you treated kindly by the staff of the operating theatre center?	1	0.3	340	88.8	33	8.6	9	2.3	0	0

### Staff-patient relationship

In terms of the confidence of the staff at the operating theatre centre, 352 (91.9%) of the study participants were satisfied. One hundred and forty (36.6%) study participants were unsatisfied with the way the staff at the operating theatre centre paid attention to complaints like pain and nausea.

### Satisfaction with service

In terms of operating on the agreed date and time, 205 (53.5%) of the study participants) were operated on the agreed date and time, whereas 16.4% of the participants were completely dissatisfied with the fairness of medication and investigation costs.

**Table 4. Percentage distribution of service for elective surgery patients satisfaction with perioperative service at Northwest Ethiopia, 2023**

Questions	Choices									
	Very Satisfied		Satisfied		Not satisfied		Dissatisfied		Very Dissatisfied	
	N	%	N	%	N	%	N	%	N	%
How did you experience the waiting time between your arrival at the operating theatre center, the operation, and recovery room?	0	0	160	41.8	156	40.7	65	17	2	0.5
The availability of the responsible physician when needed?	1	0.3	245	64	107	27.9	26	6.8	4	1
Nurses' provide prompt response for your call?	1	0.3	252	65.8	100	26.1	25	6.5	5	1.3
Adequacy of the care given by ward nurses at night?	1	0.3	251	65.5	88	23	36	9.4	7	1.8
The fairness of medication and investigation costs for you?	7	1.8	116	30.3	60	15.7	137	35.8	63	16.4
Are Conducting the services right at the first time	20	5.2	213	55.6	24	6.3	110	28.7	16	4.2
Were you operated on the agreed date and time	Yes 205 (53.5%)									
	No 178 (46.5%)									

**Fear and Concern:** Majority of the study subjects 230 (60.05) were not at all seeing the operating room, and Ninety seven (25.3%) of the respondents were not at all awaking during operation.

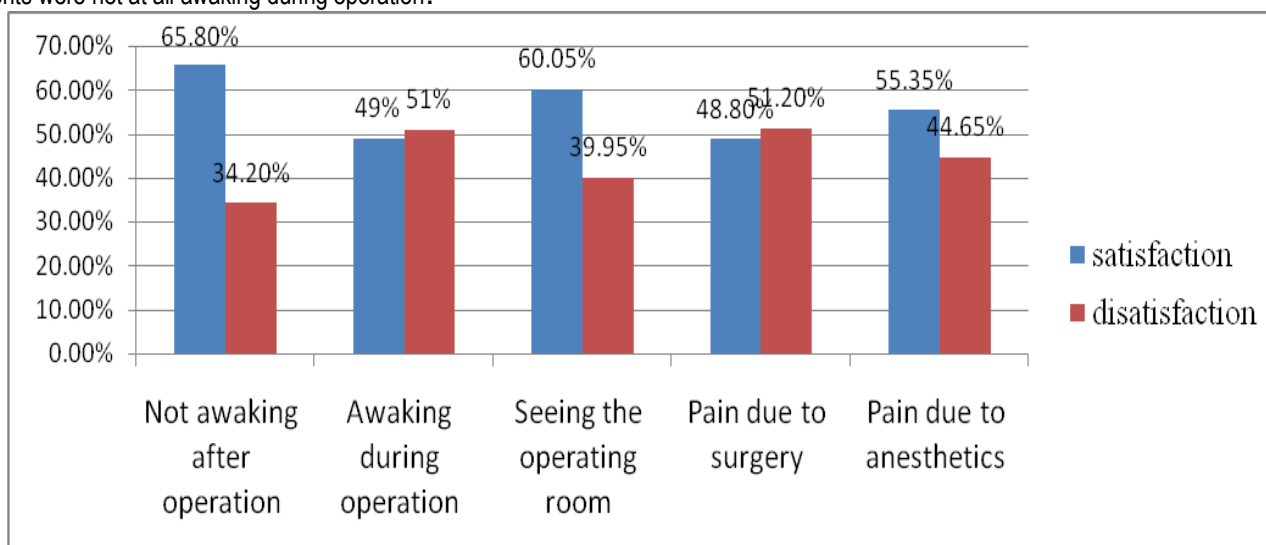


Figure 1. Percentage distribution fear and concern for elective surgery patients satisfaction with perioperative service at compressive specialized hospitals of Amhara region, Northwest Ethiopia, 2023.

**Discomfort and needs**

One hundred and fifty nine (41.5%) of the study participants had quite bit postoperative pain, while 142(37.1%) were quite were a moderate pain.

Questions	Choices									
	Not all		A little bit		Moderately		Quite a bit		Extremely	
	N	%	N	%	N	%	N	%	N	%
Postoperative pain	44	11.5	26	6.8	142	37.1	159	41.5	12	3.1
A sore throat	131	34.2	73	19.1	130	33.9	45	11.7	4	1
Back pain	145	37.9	100	26.1	107	27.9	29	7.6	2	0.5
Vomiting	216	56.4	86	22.5	64	16.7	11	2.9	6	1.5
Cold	255	66.6	74	19.3	45	11.7	7	1.8	2	0.5
Hunger	264	68.9	63	16.4	47	12.3	7	1.8	2	0.5
Thirst	263	68.7	62	16.2	46	12	10	2.6	2	0.5

**Overall patients' satisfaction with perioperative care**

According to the findings of this study, 62.1% of participants were satisfied with perioperative care. (Fig. 2)

## Elective surgery patient satisfaction



### Factors associated with elective surgery patient's satisfaction with perioperative service.

Figure 2. overall elective surgery patient satisfaction with perioperative service Northwest Ethiopia, During Bivariable analysis in this study, fifteen predictors with a P value of  $< 0.2$  were entered into the multivariable logistic

regression model. Just five independent variables were significantly correlated with the dependent variable out of fifteen predictors, with a p value of  $< 0.05$ .

A patient who lives in a rural area is 6 times more likely to be satisfied (0.000, AOR = 6.046, CI: 3.111 –11.752) when compared to an urban resident. Regarding educational status, those who were illiterate were 4.2 times (0.003, AOR = 4.260, CI = 1.646– 11.029), those in primary school (1–8th) were 5.6 times (0.000, AOR = 5.679, CI: 2.318-13.913), and those in secondary and preparatory school (9–12th) were 3.8 times (0.004, AOR = 3.881, CI: (1.553–9.695) more likely to be satisfied than those with a bachelor degree or above.

Related to operated on the agreed date and time a patients who was operated on the agreed date and time were 3.8 times (0.000, AOR = 3.822, CI: (2.087– 7.000) more likely to be satisfied than those who had post pond their agreed date and time.

concerning to the payment status for treatment, those who have health insurance were 2.8 times (0.001, AOR = 2.834, CI: 1.512–5.314) more likely to be satisfied than those who had paid. Those who didn't have expectations of hospital service were 3.3 times (0.017, AOR = 3.302, CI: 1.233–8.842) more likely to be satisfied than those who did have high expectations of hospital service.

In this study, the overall mean satisfaction score of elective surgery patients with perioperative service was 62.1% with a 95% CI of 57.1– 66.8.

This result was consistent with studies conducted in Ethiopia Jimma University Specialized Hospital(61.9%)<sup>2</sup>, Debre Tabor Specialized Hospital 62.9%<sup>15</sup>, and general hospitals at North Shewa 64%<sup>16</sup>.

Our study's result is lower than those of Ghana 80%<sup>17</sup>, Rwanda 67.43%<sup>14</sup>, Malaysia 82.7%<sup>18</sup>, Kenya 87.2%<sup>19</sup>, Eritria ( 68.8%)<sup>17</sup>, and in Ethiopia Mekelle University Ayder Specialized Hospital, which reported 88.33%<sup>20</sup>, Debrebirhan Referral Hospital, which reported 86.5%<sup>21</sup>, and the University of Gondar specialized hospital (98.1%)<sup>22</sup>.

This discrepancy could be due to the time of data collection; most of the dates of data collection were after 24 hours. Due to this, after data collection, were not able to measure patients satisfaction up to discharge, but the our findings is that data collection occurred at the time of discharge. Other discrepancies could be due to source populations; those with higher satisfaction findings included both emergency, minor, and elective surgery patients. In the current study, the findings include only elective surgery patients. As a result, elective surgery patients postponed their surgery day due to a deferent cause like unavailability of unit of blood, and physician this results decrease satisfaction level. In other side the fact that the current study area mentioned hospitals have a highly patient overload, and this leads tiredness of health care provider resulting in a lower prevalence of patient satisfaction.

The findings our study's were also higher than those of a study conducted at Mizan-Tepi University Teaching Hospital and in Amhara's public hospitals, which found that 38.7% and 52.7 % of adult patients, respectively, were satisfied with nursing care<sup>23,24</sup>.

During Bivariable analysis in this study, fifteen predictors with a P value of  $< 0.2$  were entered into the multivariable logistic regression model. Just five independent variables were significantly correlated with the dependent variable out of fifteen predictors, with a p value of  $< 0.05$ .

Table 7. shows the factors associated with elective surgery patient satisfaction with perioperative service at Northwest Ethiopia, 20233. (n= 383)					
Variables	Satisfaction level		COR(95% CI)	AOR(95% CI)	P.Val ue
	Satisfied	dissatisfied			
<b>Residence</b>					
Urban Rural	187(77.8)	52(22.2)	6.558(4.142-10.382)*	6.046(3.111-11.752)**	.000
Urban	51(34.7)	93(65.3)	1	1	
<b>Educational level</b>					
Illiterate	64(78)	18(22)	10.292(4.918-21.541)*	4.260(1.646-11.029)**	.003
Primary (1-8th)	84(75)	28(25)	8.684(4.424-17.048)*	5.679(2.318-13.913)**	.000
Secondary (9-12th)	61(69.3)	27(30.7)	6.540(3.277-13.050)*	3.881(1.553- 9.695)**	.004
Diploma	10(37)	17(63)	1.703(0.666-4.356)	2.103(0.602-7.349)	.244
Degree and above	19(25.7)	55(74.3)	1	1	
<b>Operated on the agreed date and time</b>					
Yes	149(72.7)	56 (27.3)	2.661(1.739-4.070)	3.822(2.087-7.000)	.000
No	89 (50)	89 (50)	1		
<b>Payment status for treatment</b>					
Health insurance	122(68.5)	56(31.5)	1.671(1.098-2.544)*	2.834(1.512- 5.314)**	.001
Paid	116(56.6)	89(43.4)	1	1	
<b>Expectation of service</b>					
None	35(72.9)	13(27.1)	1.278(0.619-2.639)	3.302(1.233- 8.842)**	0.017
Low	65(70.7)	27(29.3)	1.143(0.648-2.016)	1.259(0.602-2.632)	.541
Medium	39(40.2)	58(59.8)	0.319(0.187-0.545)*	0.581(0.278-1.214)	.149
High	99(67.8)	47(32.2)	1	1	

1= Constant Variable

\* Statistically significant in Bivariate

COR=crude odd ratio

The hospitals conducted in this study had more advanced technology, materials, and highly qualified health professionals compared to the above hospitals, which in turn resulted in better perioperative service practices and higher patient satisfaction.

Our study findings showed that the mean elective surgery patient satisfaction towards perioperative service in the organizational related subscales was 64.8% , discomfort and needs were 64%, fear and concern related was (58.6%),information provision subscales was (61.5%), patient staff relationship related were (62.8%), and service subscale was (63.6%). the lowest score of satisfaction from five dimensions of satisfaction measurement was fear and concern. Similarly of this study finding subscale seen in study in

AOR=adjusted odd ratio

\*\*statistically significant in multivariate

Debretabor specialized hospital <sup>16</sup>, some studies reported that information provision was the lowest score in perioperative care dimensions <sup>7,9</sup>. dissimilarity to the current finding Less fear and concern was higher score has been found in study done in Eretria <sup>7</sup>, and patient staff relationship was higher in study done the United Kingdom <sup>25</sup>.

This may be due to shortage of time for counseling and adequately prepared the patient for surgery secondary to workload.

The finding of our study showed that patient Residence, operated on the agreed date and time, expectations of service, payment status for treatment and Educational level were all found to be significant factors in patient satisfaction.

In our finding reveals that patients come from in rural area were 6.046 times more likely to be satisfied (P.Value .000) compared to urban residence. Our finding were in line with a study<sup>15,26</sup>. This may be due to the fact that patients from urban areas have high awareness about hospital service, and due to this, they have high expectations of hospital service, which results in decreased patient satisfaction compared to patients from rural areas.

Dissimilarly another study revealed that patients come from urban were highly satisfied than patients from rural area in studies conducted in Ethiopia<sup>27</sup>, and Eritrea<sup>7</sup>.

The possible reason for this discrepancy might be: Less coverage of community based health insurance at a time, and Being quality of service that meet the desired of urban residence.

The finding of our study showed that, concerning payment status for treatment, those who have health insurance were 2.834 times (P.Value 0.001) more likely to be satisfied than those who have paid. This finding supported a study conducted in North-west Ethiopia in selected hospitals<sup>28</sup>, in Tamil Nadu, South India<sup>29</sup>, and in Ghana<sup>30</sup>.

The reasons for the current finding may be due increase the costs of medication, laboratory service, procedure and un available of required medication and laboratory service under hospital laboratory and pharmacy room and leads pay a high cost at private level when a patient were paid result decrease satisfaction but in case of patient with health insurance no matter the cost of any service due to this increase satisfaction level.

Concerning to the patient expectations of service our finding showed that those who did not have expectation of hospital service were 3.302 (P.Value 0.017) more likely to be satisfied than who did have high expectations of hospital service. This finding were concurrent with study conducted at university of Gondar<sup>22</sup>. This may be due to when patient have high expectations who were had awareness hospital service and a time un fulfillment of those expectations leads decrease patient satisfaction.

The finding of our study are confirmed that when a patients operated on the agreed date and time were 3.822 times more likely to be satisfied compared to patients operated postponed of their agreed date and time. These results were agrees with the study<sup>9,10</sup>. The main reasons for these may be due to poor communication, prolonged fasting and long waiting time these results increase morbidity and fear to related their diagnosis.

In the current study regarding to educational status those in illiterate were 4.260 times (P.Value = .003) more likely to be satisfied than those a bachelor degree and above, those in primary school (1 to 8th grade) were 5.679 times (P.Value = .000) more likely to be satisfied than those a bachelor degree and above and patients whose educational status secondary and preparatory school( grade 9-12th) were 3.881 times (P.Value = .004) more likely to be satisfied than those with a bachelor degree and above. This study results

are in line with a study in Turkey<sup>(9)</sup>, in Ethiopia at Mekelle specialized hospital<sup>20</sup>, Debrebirhan referral hospital<sup>21</sup>, and research in Jimma<sup>2</sup>. This may be contributed to highly educated people having high expectations of care based on a growing understanding of disease and treatment practices as one's educational level rises, making it difficult to satisfy those compared to those at a lower educational level.

## **Strength and Limitation of the Study**

### **Strength of the study**

Specifically elective surgery patient satisfaction with perioperative service was not yet studied in and out of our country so this study shows that how mach elective surgery patient satisfied and what factors cause to dissatisfied, and also this studies conducted at five comprehensive specialized hospitals in amhara region.

### **Limitations of the study**

Some respondents being recall bias for preoperative service at discharge.

## **Conclusion and Recommendation**

### **Conclusion**

According to this study's findings, the overall prevalence of elective surgery patients satisfied with perioperative service was good. Elective surgery patient satisfaction with perioperative service was significantly influenced by patient residence, operated on agreed date and time, payment status for treatment, patient expectations for service, and the patient's educational level.

### **Recommendations**

Patient satisfaction levels should be determined frequently, and all bodies should work to reduce the factors that decrease satisfaction levels.

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