ORIGINAL ARTICLE   **OPEN ACCESS**

A Study on Patient Satisfaction of Inpatient Services at a Multi-Specialty Hospital in Vadodara: An Evidence-Based Approach

Rahul Sharma*, Mohit Verma¹, Subhasish Chatterjee²
*PhD. Scholar, Department of Management, SumandeepVidyapeeth Deemed to be University, Piparia, Vadodara, Gujarat state, India. Email: rahul.shams@gmail.com
¹PhD Guide, Principal and Professor, Department of Management, SumandeepVidyapeeth Deemed to be University, Piparia, Vadodara, Gujarat state, India
² Dean-Academic Affairs at ICFAI University, Agartala, Tripura state, India

ABSTRACT
This article is based on evidence generated by the satisfaction level of patients, and aims to determine the level at quarterly basis of satisfaction of selected IPD wards at Multi Specialty Hospital. The propose research project has been design to analyse the major factors that affect satisfaction of the patients and there by quality services. 44 different parameters spread over eight different dimensions that contributing to the quality of hospital service with special reference to In Patients Department was identified by reviewing the literatures and considering the expert opinion. The responses are collected on 5-point Likert scale through structure Questionnaire. The quarterly finding of data analysis reflects the status of satisfaction level on different dimensions in different wards and amongst different demographic factors viz. Age, gender, education and tenure of stay.
Key Words: *Patients Satisfaction, IPD, Multi-specialty Hospital, Evidence-based Approach*

INTRODUCTION
Hospital is an indivisible unit in healthcare sector plays vital role in boosting socio- economic inclusive growth of country. In the present era, with increasing level of education and healthcare awareness, quality of healthcare service become very critical issues for profit making as well non-profit making hospitals. The intervention program has been designed in consultation with hospital authorities and its effectiveness shall be measured using the same Questionnaire [1-8].
The study will also highlight the factors contributing to the dissatisfaction and recommendations to overcome as well as factors that contribute to high level of satisfaction and recommendations to capitalize the same [7].
The research was aimed at developing service delivery system of IPD patients based on evidence generated by satisfaction level of patients by analyzing factors contributing satisfaction and dissatisfaction at Multispecialty Hospital.

MATERIAL AND METHODS
i.   Study Design: Descriptive cross sectional
ii.   Sample Description
Sampling Design: Stratified Random sampling
Sample size: The population is admitted patients in different strata (selected wards) admitted in the month. The sample size shall be calculated by using following formula.

$$N = {}^{N\,x}/_{((N-1)\,E^2\,+\,x)}$$

Where, x = Z(c/100)2r (100-r), E = Sqrt [(N - n) x/n (N-1)]
Sample size: 200 patients
iii.   Time Scale of the Study: 2 months
iv.   Selection criteria:
Inclusion criteria: The inclusion criteria are:
a.   Patients who have been admitted for last two days
b.   Patients from the Medicine, Pediatric, Gynecology and Orthopaedic wards are taken.
Exclusion criteria: The exclusion criteria are:

a. OPD Patients
b. Patients admitted for less than 2 days

Data Analysis

Table 1. Frequency distribution of behavior of Employees at the reception:

Valid	Poor	Average	Good	Very good
Frequency (y)	8	87	102	9
Percentage (%)	3.9	42.2	49.5	4.4

The total averages of 55% patients were satisfied with the employees' behavior.

Table 2. Frequency distribution of satisfaction of the time taken at the reception/registration:

Valid	Very Poor	Poor	Average	Good	Very good
Frequency (y)	78	34	53	40	1
Percentage (%)	37.9	16.5	25.7	19.4	0.5

Hence 54.4% were unsatisfied with the time taken at the reception.

Table 3. Frequency distribution of behavior of staff at the billing counter

Valid	Poor	Average	Good
Frequency (y)	42	63	101
Percentage (%)	20.4	30.6	49

49% of the patients had satisfaction with the staff.

Table 4. Frequency distribution of investigation by the doctor/s

Valid	Very Poor	Poor	Average	Good	Very good
Frequency (y)	10	8	82	94	12
Percentage (%)	4.9	3.9	39.8	45.6	5.8

Hence 51.4% patients were highly satisfied by the investigation by the doctor.

Table 5. Frequency distribution of explanation of treatment by the doctor

Valid	Very Poor	Poor	Average	Good	Very good
Frequency (y)	7	27	56	94	22
Percentage (%)	3.4	13.1	27.2	45.6	10.7

Hence 56.3% patients were highly satisfied with the explanation by the doctor.

Table 6: Frequency distribution of doctor's availability in emergency

Valid	Poor	Average	Good
Frequency (y)	115	65	26
Percentage (%)	55.8	31.6	12.6

55.8% patients unsatisfied.

Table:7. Frequency distribution of time spend by the nurse with the patients:

Valid	Very Poor	Poor	Average	Good	Very good
Frequency (y)	10	32	80	74	10
Percentage (%)	4.9	15.5	38.8	35.9	4.9

Hence 40.8% patients were satisfied with the time spend by the nurses.

Table 8. Frequency distribution of nurse skills:

Valid	Very Poor	Average	Good	Very good
Frequency (y)	10	57	87	52
Percentage (%)	4.9	27.7	42.2	25.2

Hence 67.4% of patients were satisfied with the nurse skills.

Table 9. Frequency distribution of courtesy of nurses:

Valid	Poor	Average	Good	Very good
Frequency (y)	7	62	66	71
Percentage (%)	3.4	30.1	32	34.5

66.5% patients satisfied with the courtesy of the nurses.

Table 10. Frequency distribution of pharmacy services:

Valid	Very Poor	Poor	Average	Good	Very good
Frequency (y)	19	22	96	35	34
Percentage (%)	9.2	10.7	46.6	17	16.5

46.6% patients had an average opinion of the services.

Table 11: Frequency distribution of cleanliness:

Valid	Very Poor	Poor	Average	Good	Very good
Frequency	1	42	72	62	29
Percentage	0.5	20.4	35	30.1	14.1

65.9% of patients were unsatisfied with the cleanliness maintained in the hospital.

Table 12. Frequency distribution of dietary services:

Valid	Very Poor	Poor	Average	Good	Very good
Frequency (y)	24	60	82	27	13
Percentage (%)	11.7	29.1	39.8	13.1	6.3

Total 40.8% of patients were unsatisfied with the dietary services.

Table: 13: Kruskal Wallis Test analysis of Patient Satisfaction with respect to wards

Name of Variable	Ward Name	Mean Value	P-Value
Employee Behaviour	Medicine Ward	107.13	**0.695**
	Pediatric Ward	96.53	
	Gynecology Ward	106.75	
	Orthopaedic Ward	104.51	
Time for registration	Medicine Ward	102.99	**0.980**
	Paediatric Ward	102.04	
	Gynaecology Ward	108.13	
	Orthopaedic Ward	104.19	
Staff Behaviour at billing	Medicine Ward	109.26	**0.345**
	Paediatric Ward	99.78	
	Gynaecology Ward	85.80	
	Orthopaedic Ward	105.77	
Investigation by doctors	Medicine Ward	110.68	**0.009**
	Paediatric Ward	83.69	
	Gynaecology Ward	121.81	
	Orthopaedic Ward	108	
Explanation by doctors	Medicine Ward	106.01	**0.888**
	Paediatric Ward	98.71	
	Gynaecology Ward	106.23	
	Orthopaedic Ward	103.97	
Doctor's availability	Medicine Ward	104.76	**0.412**
	Paediatric Ward	96.04	
	Gynaecology Ward	118.88	
	Orthopaedic Ward	104.01	
Time spend by nurse	Medicine Ward	103.85	**0.652**
	Paediatric Ward	97.95	
	Gynaecology Ward	116.45	
	Orthopaedic Ward	104.23	
Nurse Skills	Medicine Ward	103.30	**0.604**
	Paediatric Ward	97	
	Gynaecology Ward	115.53	
	Orthopaedic Ward	106.68	
Courtesy of Nurses	Medicine Ward	106.47	**0.144**
	Paediatric Ward	90.33	
	Gynaecology Ward	102.53	
	Orthopaedic Ward	107.38	
Pharmacy	Medicine Ward	105	**0.313**
	Paediatric Ward	95.28	
	Gynaecology Ward	122.35	
	Orthopaedic Ward	103.08	
Cleanliness	Medicine Ward	97.59	**0.028**
	Paediatric Ward	120.38	
	Gynaecology Ward	80.85	
	Orthopaedic Ward	102.39	
Dietary Services	Medicine Ward	105.29	**0.976**
	Paediatric Ward	103.89	
	Gynaecology Ward	101.40	
	Orthopaedic Ward	100.92	

RESULTS AND DISCUSSION

After analyzing data, it can be seen that these were the outcomes based on various parameters in different wards:

1. **Employee Behaviour:** The P-Value in this case is 0.695; hence there is no significant difference in the patient satisfaction level based on employee behavior according to the ward of the patients. (As the P-Value is more than 0.05). 55% patients were satisfied with the employees' behavior at reception,

2. **Time taken for registration:** The P-Value in this case is 0.980; hence there is no significant difference in the patient satisfaction level based on the time taken at reception/registration according to the ward of

the patients. (As the P-Value is more than 0.05). 54.4% patients were unsatisfied with the time taken at the reception/registration,

3. **Staff Behaviour at billing:** The P-Value here is 0.345; hence there is no significant difference in the patient satisfaction level based on staff behavior at billing according to the ward of the patients. (As the P-Value is more than 0.05). 49% patients were satisfied with the staff behavior at the billing

4. **Investigation by doctors:** The P-Value in this case is 0.009; hence there is a significant difference in the patient satisfaction level based on investigation by the doctors according to the different wards of the patient. (As the P-Value is less than 0.05). 51.4% patients were highly satisfied by the doctor's investigation

5. **Explanation by doctors:** The P-Value in here is 0.888; hence there is no significant difference in the patient satisfaction level based on treatment explanation by the doctor according to the ward of the patients. (As the P-Value is more than 0.05). 56.3% patients were highly satisfied with the explanation by the doctor

6. **Doctor's availability:** The P-Value in this case is 0.412; hence there is no significant difference in the patient satisfaction level based on doctor's availability according to the ward of the patients. (As the P-Value is more than 0.05). 55.8% patients were unsatisfied with the availability of doctor

7. **Time spend by nurse:** The P-Value in this case is 0.652, hence there is no significant difference in the patient satisfaction level based on time spend by nurse according to the ward of the patients. (As the P-Value is more than 0.05). 40.8% patients were satisfied with the time spend by the nurse with them.

8. Nurse Skills:
The P-Value in this case is 0.604, hence there is no significant difference in the patient satisfaction level based on nurse skills according to the ward of the patients. (As the P-Value is more than 0.05)
67.4% patients were satisfied with the nurses' skills

8. **Courtesy of nurses:** The P-Value in this case is 0.144, hence there is no significant difference in the patient satisfaction level based on courtesy of nurses according to the ward of the patients. (As the P-Value is more than 0.05). 66.5% patients were satisfied by the courtesy of nurses

9. **Pharmacy:** The P-Value in this case is 0.313, hence there is no significant difference in the patient satisfaction level based on pharmacy service according to the ward of the patients. (As the P-Value is more than 0.05)
46.6% patients had average satisfaction with the pharmacy services

10. **Cleanliness:** The P-Value in this case is 0.028, hence there is a significant difference in the patient satisfaction level based on cleanliness according to the ward of the patients. (As the P-Value is less than 0.05)
65.9% patients were unsatisfied with the cleanliness and hygiene factor maintained at the hospital

11. **Dietary Services:** The P-Value in this case is 0.976, hence there is no significant difference in the patient satisfaction level based on employee behavior according to the ward of the patients. (As the P-Value is more than 0.05). 40.8% patients were unsatisfied with the dietary services.

REFERENCES

1. Akoijam BS, Konjengbam S, Bishwalata R, Singh TA. (2007). Patients' satisfaction with hospital care in a referral institute in Manipur. Indian J Public Health. 51(4):240-243.
2. Aleena Tasneem et al (2010) "Patient satisfaction; a study at teaching hospital in Lahore, Pakistan". J. Pharm. Sci. & Res. Vol.2 (11), 2010,767-774
3. Aldebase Y. & Ahmad M. (2011), "Patients' satisfaction with Medical Services in the Qassim Area". Journal of Clinical and Diagnostic Research. 2011 August, Vol-5(4): 813-817
4. Babu&Shrinivas (2012), "a study on patient satisfaction three Urban Hospitals in Guntur District, Andhra Pradesh)" 101-118
5. Mohan R & Kumar K (2011), "A study on satisfaction of patients" Zenith International Journal of Business, Vol.1 Issue 3, December 2011, pp. 15-25
6. Mishra P. & Gupta S. (2012), Study of patient satisfaction in a surgical unit of a tertiary care teaching hospital (624-634)
7. Singh et al (2013), "Patient satisfaction levels in a tertiary care medical college hospital in Punjab, North India" Int. J Res Dev. Health. November 2013; Vol. 1(4): 172-82
8. Singh S & Jain S (2014); "satisfaction level of IPD patients with medical services". Int. Journal of Management, Volume 5, Issue 2, February (2014), pp. 01-09