

## DETERMINANTS OF PATIENT'S SATISFACTION IN AN OUT PATIENT DEPARTMENT (OPD) OF A HOSPITAL

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### ABSTRACT

**Background:** For Health care delivery Industry to sustain and flourish in long run patient satisfaction is very vital thing. It is very important to estimate the satisfaction of the patient and to find out its determinants. Such knowledge provides us right direction to take action in meaningful and impactful way in health care settings. **Aim & Objectives:** 1. To estimate satisfaction in patients attending out-patient department (OPD) of a tertiary care hospital. 2. To determine the factors affecting satisfaction in patient's attending out-patient department (OPD) of a tertiary care hospital. **Materials and Methods:** A cross-sectional study conducted over a period of 12 weeks using simple random method for selecting subjects in a tertiary care hospital. Using a semi structured questionnaire, data for satisfaction and possible factors determining satisfaction of patients is collected. All the variables tested against overall satisfaction rate using chi square test at 95% confidence level. **Results:** out of the 216 participants 74.5% were satisfied. Resident of a Rural area, Reception Services, Ease of finding his doctor, Affordability, Doctor's treatment, Communication of Expected outcome, Nursing Services, Nursing Staff Communication, Laboratory persons Communication, Pharmacy Services, Pharmacy Staff Communication, Time spent in Hospital, Time spent with doctor are the factors influencing patient's satisfaction. **Conclusions:** It is important to increase communication skills and service attitude for better patient's satisfaction in hospitals.

## INTRODUCTION

For Health care delivery Industry to sustain and flourish in long run patient satisfaction is very vital thing. It is very important to estimate the satisfaction of the patient and to find out its determinants. Such knowledge provides us right direction to take action in meaningful and impactful way in health care settings. It should be a continuous process.

Many a times doctors and other staff are well satisfied with the outcome but same is Not reflected on the receiver end. In contrast to other industries, a unique challenge in health care is wide gap between expectations and reality. Logic behind this statement is everyone expects to come back to normal life irrespective of the health status and no one wants to lose their life. Both are not always possible, as death is inevitable at certain point of time for every one and

health is interplay of several known and unknown factors which includes host and environmental factors too. In spite of several limitations there is definite possibility in improving patient's satisfaction by finding out and addressing the satisfaction determinants.

Proper communication with the patients, making them realize the realities and limitations of medical science could be one important factor for patients' satisfaction.

### Review of Literature

There have been several studies to find out the determinants of patient's satisfaction. Several factors like brand image, Trust on the doctor, less waiting time, good communication skills of the health care staff, availability of standard laboratory services, etc. were some of the few determinants under study in several different studies worldwide.

In a study,<sup>[1]</sup> by Lonial S et.al. it is found that Service attributes play an important role in customer satisfaction.

In a study,<sup>[2]</sup> at China, it is found that the overall satisfaction in outpatients and likelihood to recommend the hospital is significantly related to communication with doctors, acceptable charges, time spent with doctors and waiting time.

In a study,<sup>[3]</sup> at Ethiopia, information on the prevention of recurrent illnesses emerged as a factor positively affected patient satisfaction.

In an integrated review,<sup>[4]</sup> by Wei-Jiao Zhou et.al. patient's loyalty to health care providers is determined by quality, commitment and brand image. Clear explanations from doctors and nurses, timely service are found to be determinants of patient's satisfaction in a study,<sup>[5]</sup> in Dubai.

In across sectional study,<sup>[6]</sup> on diabetic patients at endocrinology out patient at university hospital of La Rabta, it is found there was overall satisfaction with factors like doctors' behaviour, administrative formalities, accessibility of departments etc.

The overall satisfaction for outpatients is influenced by communication with doctors and acceptable charges. Outpatient satisfaction and hospital recommendation are also influenced by time spent with doctors.<sup>[7,8]</sup>

Perceived quality and actual test results of laboratory are significantly associated in a public health facility in North east Ethiopia.<sup>[9]</sup>

In a study,<sup>[10]</sup> at Ethiopia, 78.6% of the patients were satisfied with the clinical laboratory services but patients were dissatisfied with cost of service. patient satisfaction towards clinical laboratory services,<sup>[11]</sup> was 48.3%

Thirty-three percent were very satisfied,<sup>[12]</sup> and 57% were satisfied which was determined privacy, decision-making, communication, and respectfulness.

Though treatment outcome is ultimate thing to satisfy,<sup>[13]</sup> patients, his experience about interactions, structure and process of health care facility too will influence patient satisfaction.

In a concept analysis,<sup>[14]</sup> it was stated that attributes of patient satisfaction in the healthcare context were provider attitude, technical competence, accessibility, and efficacy.

In a study,<sup>[15]</sup> among US adults it is found that there is an association between patient satisfaction with the patient-physician relationship.

A study,<sup>[16]</sup> by katsaliaki K et al. provides evidence for the association between patient satisfaction and duration of communication.

Patients' perception of physicians' empathy is one factor for patient satisfaction.<sup>[17]</sup>

In a study,<sup>[18]</sup> at Iran, 57.7% of the patients are dissatisfied with nursing services.

In a study,<sup>[19]</sup> by Lotfi M et.al. most patients were dissatisfied with nursing care and There was a correlation between nurse-patient communication and patient satisfaction with nursing care

In a cohort study,<sup>[20]</sup> on cost of treatment and patient satisfaction reveals positive relation

A study at Pakistan, suggests physician's behaviour effects patient satisfaction.<sup>[21]</sup>

Patient communication utilizing specific communication tools positively impacted patient satisfaction.<sup>[22]</sup>

In a cross sectional study,<sup>[23]</sup> highest satisfaction was found with doctor's consultation, being waiting time is less.

#### **Justification**

- Many a times though the healthcare personnel are satisfied with their services, same is not reflected on the patients' side. Hence it is attempted to find what factors are influencing their satisfaction
- Once factors are found in improving patient's satisfaction, they can be addressed in better way.

#### **Project Objectives**

1. To estimate the satisfaction in patients attending out-patient department (OPD) in a hospital.
2. To determine the factors affecting the satisfaction and Un satisfaction in patient's attending out-patient department (OPD) in a hospital.

## **MATERIALS AND METHODS**

**Type of study:** A hospital based cross sectional study.

**Study setting:** A Medical College Hospital

#### **Tools:**

- A self-administered Semi structured questionnaire.
- Secondary data from the records of OP registration, pharmacy, and doctor's office.

#### **Operational Definitions [Satisfied Vs NOT so satisfied]:**

Satisfaction will be decided on TWO questions

- Do you refer any known friends or relatives to this hospital for their health issues? Yes/ No/ can't say
- Do you come again to this hospital in future for any other health issues? Yes/ No/ can't say

All those answers with yes to BOTH questions will be counted as **Satisfied**, those with can't say and No, even to one of the two questions will be counted as **NOT so satisfied**.

To find out the determinants of satisfaction some possible variables that are identified from literature review will be tested against "satisfied and Not satisfied" for any significant association.

#### **Study variables are**

- Demographic variables
- Opinion of patient about their affordability for this hospital cost
- Ease of finding and meeting the doctor
- Explanation by the doctor and staff regarding their health problem and management.
- Expected outcome – communicated or Not
- Attitude of the staff.

- Subjective feeling of satisfaction with various departments like pharmacy, laboratory, reception and staff.
- Certain data is recorded from the records and their association with satisfaction is tested.
- Time gap between OP entry time and pharmacy billing time.
- Time spent with doctor.

### Sampling

**Sample size calculation:** In an earlier preliminary study<sup>8</sup> conducted in this hospital, it is found that 85.0% of the participants expressed that they will refer others to this hospital. Based on this prevalence sample size calculated.

$$N = z^2 - p(1-p) / d^2 = (1.96)^2 \times 0.85(1-0.85) / 0.05^2 = 195.92$$

Z value at 95% confidence level is 1.96

Level of absolute precision, d is taken as 5%

The calculated sample size at 95% confidence level and 5% precision is 196.

Added 10% to deal with missed data making the sample size  $(196+19.6) = 216$ .

**Sampling Method:** Proportionate (stratified) Random Sampling Method.

**Sample Frame:** OP registration is from 9.00 am to 12.00 noon only. But OP runs up to 4.00 pm to complete the consultation, reviewing investigations if ordered and finalize the prescription. Thus entire sample frame is available by 12.00 noon every day.

Out of them three are selected randomly using online tools, from Monday to Saturday on every day for 12 weeks.

Sample size to be achieved:  $3(\text{per day}) \times 6(\text{days in a week}) \times 12(\text{number of weeks}) = 216$

**Inclusion Criteria:** Selected candidates randomly from the OP list, if willing to participate in the study are included. If Not willing, we will include another random person.

**Exclusion Criteria:** severely sick patients referred to IP block.

**Data Collection:** After taking informed consent from the patient, pre tested semi structured questionnaire is administered.

If the patient is of age less than 15 years, attendant's responses will be recorded.

Later required secondary data as per the case record form will be collected from OP Registration records, Pharmacy Records and records of Consulting Doctor's office

**Data Analysis:** The collected data is entered in excel sheets. Data analysed and depicted in percentages and diagrams. Every variable, either 'Demographic variables' or 'factors for satisfaction' will be tested against over-all 'Satisfied' and 'NOT so satisfied' for statistical significance. Chi square test will be used to identify significant associations.

**Timeline:** Duration of the study is approximately 6 months of which data collection is for 3 months.

**Missed data:** we will try to encourage the participants for complete answering the questionnaire. How ever if any data is not made

available, it will be taken as average of all the remaining data. Such data will be limited to less than 5%.

### Expected Outcome / Deliverables:

- An estimate of satisfaction level of the patients
- Determinants of the satisfaction

### Strengths & Limitations

This study is spread over 12 weeks so as to include wide variety of patients which makes the out-come more representative. Sampling is random and unbiased.

Still as it is a cross-sectional study, Opinions of the patient may change after few days of leaving the hospital. The disease may take a positive or negative turn which is not always predictable. Hence depending on the disease cure status in the following days, opinions may change. Individual specialties and doctors' role could influence the patient satisfaction level. Further studies have to be conducted to establish their contribution.

## RESULTS

Among the 216 participants in this study, 74.5% are Satisfied with the hospital's service which means they are willing to come again in need and also recommend this hospital to others. [Figure 1]

Majority 45.4% of the patients visiting the hospital OPD are of the age group 45 to 60 years. There are almost equal number of males and females in this study. More than half of the patients are having graduation or more education. Few people, 13.7% are dependent or not employed. Home makers and working persons constitutes the major chunk of this study. Among the total participants, rural people are marginally higher (54.6%) in number. [Table 1] Age, gender, education & Occupation does Not seem to be a factor, influencing patient's satisfaction. Rural people (86.4%) are significantly more satisfied than urban people (60.2%) with the hospital services ( $p=0.000011$ ). [Table 2]

Here 93.7% of the persons expressing 'Good' with reception are also satisfied with overall hospital services ( $p=< 0.00001$ ). Thus 'Reception Services' has emerged as a factor influencing patient satisfaction significantly.

Ease of finding a doctor ( $p=< 0.00001$ ) is significantly associated with overall satisfaction with hospital services.

'Affordability' ( $p=< 0.00001$ ), Satisfaction with Doctor's treatment ( $p=< 0.00001$ ) emerged as other factors influencing overall satisfaction. [Table 2]

Only 62% are satisfied with Doctor's communication. However It is Not influencing overall satisfaction.

Communication of Expected outcome of the illness ( $p= 0.027904$ ) by the doctor is significantly associated with overall satisfaction.

Nursing care ( $p=< 0.00001$ ) and Nursing staff communication ( $p=< 0.00001$ ) significantly associated with overall satisfaction.

Laboratory services are Not influencing significantly. But Laboratory staff communication ( $p < 0.00001$ ) is significantly associated with.

Pharmacy Services ( $p = 0.00091$ ) and Pharmacy staff communication ( $p < 0.00001$ ) are significantly associated with overall satisfaction.

63.4% spent 2-4hrs of time in the hospital. Time spent in the hospital ( $p = 0.000499$ ) has emerged as

significant factor influencing satisfaction/dissatisfaction with overall Hospital Services.

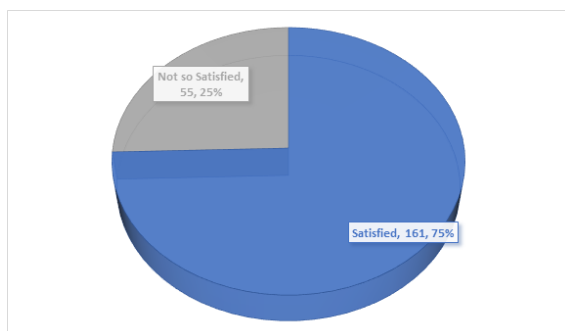
Majority (64.4%) spent 5-15 min time with doctor. It is also a significant factor influencing satisfaction/dissatisfaction with overall Hospital Services. More the time spent with the doctor more is the satisfaction.

**Table 1: Demographic variables & their association with Patient's satisfaction (n=216)**

Variable	Sub Group	Total frequency (%)	Satisfied (%)	Chi <sup>2</sup>	p
Age	<15	7 (3.2)	6 (85.7)	2.9186	0.57154
	15-30	15 (6.9)	11 (73.3)		
	30-45	39 (18.1)	30 (76.9)		
	45-60	98 (45.4)	76 (77.6)		
	>60	57 (26.4)	38 (66.7)		
Gender	Male	106 (49.1)	78 (73.6)	0.0994	0.75253
	Female	110 (50.9)	83 (75.5)		
Education	Illiterate	38 (17.6)	28 (73.7)	3.6013	0.16519
	<12	66 (30.6)	44 (66.7)		
	Graduate and above	112 (51.9)	89 (79.5)		
Occupation	Home-maker	83 (38.4)	63 (75.9)	1.1574	0.76323
	employed/self employed /pensioners	73 (33.8)	55 (75.3)		
	daily wager	30 (13.9)	20 (66.7)		
	unemployed & other dependents	30 (13.9)	23 (76.7)		
Residence	Rural	118 (54.6)	102 (86.4)	19.4173	<b>0.000011</b>
	Urban	98 (45.4)	59 (60.2)		

**Table 2: Select factors and their association with Patient's satisfaction (n=216)**

Variable	Sub Group	Total frequency (%)	Satisfied (%)	Chi <sup>2</sup>	p
Reception services	Good	127 (58.8)	119 (93.7)	73.5921	< 0.00001
	Satisfactory	41 (19.0)	27 (65.9)		
	Not satisfied	48 (22.2)	15 (31.3)		
Ease of finding a doctor	Easily	134 (62.0)	126 (94.0)	73.1272	< 0.00001
	Ok	35 (16.2)	18 (51.4)		
	Not easily	47 (21.8)	17 (36.2)		
Affordability	Good	161 (74.5)	138 (85.7)	46.7748	< 0.00001
	Satisfactory	32 (14.8)	17 (53.1)		
	Not satisfied	23 (10.6)	6 (26.1)		
Doctor's treatment	Good	154 (71.3)	136 (88.3)	54.6158	< 0.00001
	Satisfactory	33 (15.3)	15 (45.5)		
	Not satisfied	29 (13.4)	10 (34.5)		
Doctor's Communication	Good	134 (62.0)	100 (74.6)	1.1623	0.559263
	Satisfactory	51 (23.6)	40 (78.4)		
	Not satisfied	31 (14.4)	21 (67.7)		
Communication of Expected outcome	yes	114 (52.8)	92 (80.7)	4.834	<b>0.027904</b>
	No	102 (47.2)	69 (67.6)		
Nursing care	Good	96 (44.4)	85 (88.5)	32.8723	< 0.00001
	Satisfactory	66 (30.6)	51 (77.3)		
	Not satisfied	54 (25.0)	25 (46.3)		
Nursing staff communication	Good	84 (38.9)	72 (85.7)	30.1714	< 0.00001
	Satisfactory	72 (33.3)	60 (83.3)		
	Not satisfied	60 (27.8)	29 (48.3)		
Laboratory services	Good	112 (51.9)	85 (75.9)	0.2346	0.88931
	Satisfactory	75 (34.7)	55 (73.3)		
	Not satisfied	29 (13.4)	21 (72.4)		
Laboratory staff Communication	Good	85 (39.4)	73 (85.9)	24.7084	< 0.00001
	Satisfactory	75 (34.7)	60 (80.0)		
	Not satisfied	56 (25.9)	28 (50.0)		
Pharmacy services	Good	98 (45.4)	82 (83.7)	14.0125	<b>0.00091</b>
	Satisfactory	66 (30.6)	50 (75.8)		
	Not satisfied	52 (24.1)	29 (55.8)		
Staff in pharmacy Communication	Good	95 (44.0)	83 (87.4)	23.5386	< 0.00001
	Satisfactory	65 (30.1)	49 (75.4)		
	Not satisfied	56 (25.9)	29 (51.8)		
Time spent in hospital	<2hr	39 (18.1)	34 (87.2)	27.3063	< 0.00001
	2-4 hrs	137 (63.4)	110 (80.3)		
	>4 Hrs	40 (18.5)	17 (42.5)		
Time spent with Doctor	<5 min	30 (55.6)	54 (25.0)	15.2076	<b>0.000499</b>
	5-15 min	110 (79.1)	139 (64.4)		
	>15 min	21 (91.3)	23 (10.6)		



**Figure 1: Patient's Satisfaction with Hospital Services (N=216)**

## DISCUSSION

In the other studies reviewed satisfaction rate was highly varying. In the Reference,<sup>[12]</sup> cited, very satisfied were thirty three percent and satisfied were fifty seven percent. Our study result is on par with other studies (74.5%).

Reference,<sup>[1]</sup> cited also in conformity with our study that service attributes contribute to satisfaction. In Ref,<sup>[6]</sup> accessibility of departments influenced patient's satisfaction. In our study too ease of finding doctors affected satisfaction.

In Ref,<sup>[15]</sup> Patient Physician Relationship positively affects satisfaction. In Ref,<sup>[3]</sup> cited information on illness affected satisfaction. In Ref,<sup>[5]</sup> too explanations from doctors affected satisfaction. Same is the result in our case too.

In Reference,<sup>[18]</sup> cited 57.7% of the patients were not satisfied with nursing services. Here in our study only 25% are Not satisfied for nursing services. It is also significantly influencing patients satisfaction in our study.

However, in other studies like Ref,<sup>[9,10]</sup> says laboratory services are causes for both satisfaction and dissatisfaction some times. Here laboratory personnel communication related positively.

Reference,<sup>[2]</sup> cited also proves time spent with doctors and waiting time were affecting patient's satisfaction. Ref,<sup>[8,16]</sup> too proved time spent with doctors influences patient's satisfaction. Exactly same out come found in our study.

In reference,<sup>[4]</sup> cited quality and commitment of health care providers emerged as significant factors in satisfaction. Here in our study, doctor's treatment being one of the factors liked by patients is in line with the literature.

Rural personnel and reception services are also positively associated, however such findings are unique in our study.

## CONCLUSION

The study was conducted on 216 patients reported to the hospital over 12weeks duration. Out of them 74.5% are satisfied with the hospital's service which means they are willing to come again in need and also recommend this hospital to others.

The following factors emerged as factors associated with patient's satisfaction.

- Resident of a Rural area
- Reception Services
- Ease of finding his doctor
- Affordability
- Doctor's treatment
- Communication of Expected outcome
- Nursing Services
- Nursing Staff Communication
- Laboratory persons Communication
- Pharmacy Services
- Pharmacy Staff Communication
- Time spent in Hospital
- Time spent with doctor

### Recommendations

Based on the results we can recommend following measures for the best interest of any Institute.

- To satisfy Urban area people, we recommend to improve professional behavior and communication of the staff through trainings, monitoring etc.
- Nursing, laboratory, pharmacy and all other core staff must improve their proficiency and communication.
- Reception services must expand beyond registration to identifying the right doctor for the patients' health problem, pathfinding to consultation rooms, labs etc.
- Must continue to provide the services in affordable prices in spite of improving quality in all other areas.
- Doctors must make a habit of explaining the prognosis in general terms to the patients. They must spend reasonably more time with patient in consultation to help them understand the situation and accept the treatment.
- Total time of stay in hospital can be decreased by using better integrated services.

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