

# Factors Influencing Patients in Hospital Selection and Satisfaction with Inpatient Services

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## ABSTRACT

Consumer satisfaction is a significant contributor to the success and longevity of health care institutions. The patient's perception about the service quality has a vital role in determining consumer satisfaction. The Indian healthcare sector is anticipated to record a compounded annual growth rate (CAGR) of 22.9% to grow to US \$ 280 billion in the period 2015-20. The healthcare delivery system in India can be classified into three categories: Public, Private and Public Private Partnership. The private sector accounts for 74% of India's entire healthcare spending. With increasing awareness of health related issues and the healthcare system in general, patients today have transformed from being "Passive" to being "Active" participants of the healthcare system. Even the choice to consult a particular physician is no more a simple one. The patient now has numerous sources of information sources at his disposal, with the internet being the most powerful one. A better informed patient is asking more questions : with respect to the diagnosis, choice of drugs, duration of treatment and cost. An inability to provide satisfactory answers can cause dissatisfaction and loss of trust, compelling a switch. The present study found significant associations of availability of specialist surgeons and physicians, doctors' reputation, affordability, quality of health care and reputation of the hospital with the patient decision making process.

**Keywords:** Hospital selection, affordability, doctors' reputation

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## INTRODUCTION

Consumer satisfaction is a significant contributor to the success and longevity of health care institutions. The patient's perception about the service quality has a vital role in determining consumer satisfaction. The Indian healthcare sector is anticipated to record a compounded annual growth rate (CAGR) of 22.9% to grow to US \$ 280 billion in the period 2015-20.<sup>1</sup> The healthcare delivery system in India can be classified into three categories : Public, Private and Public Private Partnership. The private sector accounts for 74% of India's entire healthcare spending.<sup>1</sup> With increasing awareness of health related issues and the healthcare system in general, patients today have transformed from being "Passive" to being "Active" participants of the healthcare system. Even the choice to consult a particular physician is no more a simple one. The patient now has numerous sources

of information sources at his disposal, with the internet being the most powerful one. A better informed patient is asking more questions : with respect to the diagnosis, choice of drugs, duration of treatment and cost. An inability to provide satisfactory answers can cause dissatisfaction and loss of trust, compelling a switch.

The objectives of the study was to study the factors that affect consumer decision making with regard to hospital selection, to identify and rate the factors that influence hospital selection and to study the satisfaction levels of patients with the chosen factors.

## METHODOLOGY

This prospective study was carried out in a tertiary care teaching hospital from November 2016 to April 2017. This study was conducted on 400 (estimation of proportion patients visiting the inpatient department of a tertiary care teaching hospital. Sampling technique used was non probability convenience sampling.

$$\begin{aligned}n &= Z^2_{1-\alpha/2} P (1-P)/d^2 \\n &= 1.96^2 * .50(1-.50)/.05^2 \\n &= 384\end{aligned}$$

**Data collection:** After obtaining permission from the Institutional Ethics committee, data was collected through structured/semi-structured questionnaires,

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from patients who were admitted in the hospital for more than or equal to 3 days. Two questionnaires were administered: A pre-admission and a post-admission. The pre questionnaire has two parts. In the first part of the questionnaire, personal details of the patients like age, gender, education and annual income were captured. In the second part of the questionnaire, the responses of the patients to questions related to the factors influencing their selection of the hospital were recorded. The responses were collected on a 5 point Likert scale: from strongly disagree to strongly agree.

Inpatients of different wards of the tertiary care teaching hospital were approached and requested to fill the questionnaire. After taking their consent, the questionnaire was administered to them. A translated version of the questionnaire in Kannada was also provided. A total of 475 responses were received. 75 incompletely filled forms were excluded from analysis.

**Data Analysis:** The data was tabulated for analysis. The responses to individual factors were weighted using a linear scale : boxes ticked as “strongly agree” were weighted as 5, “agree” weighted as 4, “neutral” weighted as 3, “disagree” weighted as 2 and “strongly disagree” weighted as 1. The weighted scores of all responses to a question were totalled to arrive at a total weighted score for that particular factor. The calculation can be summarized with the following formula:

Percentage weighted score for each factor = (individual weighted scores of the factors / total possible score) x 100. Both pre and post questionnaires were analysed.

## RESULTS

Table 1: Distribution of age, gender, educational qualifications and profession

	Frequency	%age
<b>Age</b>		
<30 years	144	36.0
30-50 years	159	39.8
>50 years	97	24.3
<b>Gender</b>		
Male	221	55.3
Female	179	44.8
<b>Educational qualification</b>		
High school and below	228	57
Graduation and above	172	43
<b>Professions</b>		
Business	102	25.5
Service	90	22.5
Others	208	52

Table 2: Distribution of annual income, patients in inpatient departments, length of stay.

	Frequency	%age
<b>Annual income</b>		
≤250000	366	91.5
>250000	34	8.5
<b>Departments</b>		
Orthopedics	94	23.5
Cardiology	61	15.3
Urology	46	11.5
Gastroenterology	48	12.0
Neurology	66	16.5
General Medicine	85	21.3
<b>Length of stay</b>		
Upto 3 days	108	27
More than 3 days and upto 5 days	190	47.5
More than 5 days and upto 7 days	102	25.5

Table 3: Distribution of Source of information about the hospital, evaluation of the hospital, hospitals compared before selection, people who will recommend the hospital to others, overall satisfaction.

	Frequency	%age
<b>Source of information</b>		
Friends and Relatives	232	58
Referral Doctors	118	29.5
Information centers	36	9
Information centers	36	9
<b>Evaluation of hospital</b>		
Yes	277	69.3
No	123	30.8
<b>No. of hospitals compared before selection</b>		
2	221	79.8
3	52	18.8
>3	4	1.4
<b>Overall satisfaction</b>		
Yes	364	91
No	36	9

Association between demographic variable and factors affecting patients' decision making process for the selection of a hospital. by linear-by-linear association, we find that there is a linear trend between the following sets of variables :

1. Nearness category and occupation category, with a p-value of 0.015 which is less than the level of significance i.e., 0.05.
2. Age category and quality of health-care, with a p-value of 0.036 which is less than the level of significance i.e., 0.05.
3. Age category and infrastructure, with a p-value of 0.006 which is less than the level of significance i.e., 0.05.
4. Age category and nursing care, with a p-value of 0.019 which is less than the level of significance i.e., 0.05.

5. Length of stay and affordability, with a p-value of 0.001 which is less than the level of significance i.e., 0.05.
6. Educational qualification and Infrastructure, with a p-value of 0.044 which is less than the level of significance i.e., 0.05.
7. Educational qualification and quality of food, with a p-value of 0.045 which is less than the level of significance i.e. 0.05.
8. 8.Treatment department and nearness, with a p-value of <0.001 which is less than the level of significance i.e., 0.05.
9. Treating department and hygiene, with a p-value of 0.028 which is less than the level of significance i.e., 0.05.
10. Treating department and infrastructure, with a p-value equal to 0.015 which is less than the level of significance i.e., 0.05.
11. Treatment department and nursing care, with a p-value equal to 0.048 which is less than the level of significance i.e., 0.05.
12. Treatment department and reimbursement, with a p-value of 0.003 which is less than the level of significance i.e., 0.05
13. Age category and infrastructure, with a p-value of 0.014 which is less than the level of significance i.e., 0.05.
14. Length of stay and affordability, with a p-value of 0.037 which is less than the level of significance i.e. 0.05.

Table 4: A ranking of the factors influencing the decision making process with percentage and rank.

Expectations	Factors		Experience	
	%age	Rank	%age	Rank
Availability	84.8	1	82.55	1
Doctors reputation	84.8	1	81.85	2
Reputation of the hospital	82.4	2	79.65	3
Quality of health care	82.15	3	79.15	4
Nursing care	80.05	4	78.4	5
Hygiene	77.75	5	76.25	6
Infrastructure	77.4	6	75.55	7
Affordability	76.85	7	74.25	8
Reimbursement	75.6	8	74.4	9
Nearness	74.9	9	73.4	10
Quality of food	74.25	10	73.1	11

Using the Stuart Maxwell test, significant associations were found for the following :

1. Availability of specialist surgeons and physicians
2. Doctors' reputation
3. Affordability
4. Quality of health care
5. Reputation of the hospital.

## DISCUSSION

The days of 'doctor knows best' are fast changing in urban societies, where the patient has transformed into a consumer who wants to play an active part in decision-making with regard to their treatment. The reason/s for the selection of a hospital for treatment varies from patient to patient. It also fluctuates from time to time. The reasons may be location, cost, infrastructure, recommendations and doctors' reference. Patient perception plays an important part.<sup>2</sup>Customer expectation and perceived service quality are variables that affect the development of consumer satisfaction. Contented customers return, buy more and communicate their experiences to other people. The main goal of this study is to try to understand the factors which influence the patient selection of a tertiary care teaching hospital and the factors influencing the patient satisfaction with the same. Numerous studies have thrown up factors that influence patient selection of hospitals and healthcare

providers.<sup>3</sup>This selection process varies from patient to patient and the factors include location, cost and infrastructure among others<sup>4,5</sup>. This is all the more relevant in a country like India, where public health spending is far lesser than what it ought to be<sup>6</sup>.

Consumer choice theory states rational consumer choices as those that lead the consumer to maximize her utility (satisfaction, happiness).<sup>7</sup>Dubey et al. found that proximity was the most important factor for people in choosing a hospital. Bin Saeed KS identified reputation and expertise of the consultant, followed by a clean and comfortable environment as the most important factors influencing choice of hospital<sup>8</sup>. Mahon et al. found that when referring patients for elective surgery, the most common influences on the choice of hospital were proximity and convenience, knowledge of the consultant, the general standard of clinical care, the patient's own preferences and the patient's previous experience at the hospital<sup>9</sup>.

Egunjobi in Nigeria identified the following factors as influencing hospital choice : Proximity, quality of service, relative living in the hospital town, treatment cost, ease of transport, religious affiliations of the hospital and connections with the hospital staff. Proximity was the leading factor, accounting for 31.8% of the total responses<sup>10</sup> Singh et al found that family members, doctors or a combination of family members and doctors heavily influenced the choice of hospitals<sup>11</sup>.

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