

Patient Satisfaction towards Multi Specialty Hospitals (A Case Study of Multi Specialty Hospitals, Telangana State)

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Abstract:

Health care quality has become a universal matter. The health care sector is undergoing a rapid transformation to meet the ever-increasing requirements and demand of its patient population. Patient satisfaction is one of the established yardsticks of hospital services. Patients' satisfaction surveys have gained increasing attention as important and vital sources of information for recognizing gaps and developing an effective action plan for quality improvement in the healthcare establishments. As a service industry, hospitals are expected to offer quality of care that its customers require. Therefore, it is important for any hospital management to identify patient's perceptions and expectations of the quality of care on a regular basis. Proper patient survey forms aid them for the assessment of the standards or requirements that are met by their organizations. In this view to measure the quality of healthcare delivery and its impact on patients, we have carried out a study on patient satisfaction of several Multi specialty hospitals in the state of Telangana. The analysis identified key factors that lead to satisfaction and dissatisfaction of patients. The key finding in this study is the factor associated with patients' perceptions of care is most vital in patient satisfaction features.

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Introduction:

There is no uncertainty that the best resource of any nation is its people. This is because their general well-being determines the overall progress and development of a national economy as enhanced quality of life.

Any nation that has unhealthy population is destined to face difficulty in the implementation of development programs to improve the quality of life of the people. But most of the countries are severely facing a challenge in providing good quality of health care.

Healthcare service scenario is evolving day by day, more focus and emphasis has been given to the patient satisfaction as it is considered core to quality of health care. Hospitals are always faced with the challenge of providing the quality of care that meets the expectation of its clients. As a service industry, hospitals are expected to provide its customers with quality of care they need.

Review of literature:

Though numerous works have presented this topic, patient satisfaction remains difficult to

determine. Few of the papers surveyed are presented in this section:

La Monica E et.al(1986) have conducted three studies called to develop and test an instrument to quantify hospitalized patients' satisfaction with nursing care. Content validation trials involved both clinicians and patients ($N = 75$). An inverse association of satisfaction scores to negative mood states demonstrated evidence of construct validity. Factor analytic procedures ($N = 664$) failed to confirm the existence of the subscales initially conceptualized for this instrument and others in common use. They identified three new factors viz., dissatisfaction, interpersonal support, and good impression. Reliability coefficients for the total instrument in successive testings were .92 ($N = 100$) and .95 ($N = 533$).

VuoriH(1987) had tried to find out whether Patient satisfaction--an attribute or indicator of the quality of care or not. They opined that Systematic measurement of patient satisfaction is occasionally included in routine quality assurance (QA) programs. Practical reasons have been specified to elucidate this omission: the mental and physical state of patients, their lack of the necessary scientific and technical knowledge, the rapid pace of events of care, and methodological problems related to measuring patient satisfaction. However, a strong case can be made to include patient satisfaction in QA, including ethical considerations, philosophical changes occurring in the health care field, and a clear definition of the impact of patient satisfaction on quality care. The author concluded that patient satisfaction is part and parcel of quality health care; that patients are capable of assessing the quality of care; and that patient satisfaction can be measured.

Cleary PD et.al(1989) have tried to find patients' assessments of hospital care. Brigham and Women's Hospital in Boston refined a patient survey instrument that gives information on satisfaction with specific areas of care as well as the impact of socio demographic correlates and length of stay on satisfaction. The survey was done to 255 medical

patients, 347 surgical patients, and 329 obstetric patients. Results were analyzed using summary scales for ratings of physician care, nursing care, room, and food service. The analysis lead to high ratings of satisfaction though there are several areas to be improved.

Dawn AG.et al(2003) expressed that as physicians and health administrators increasingly incorporate patients' perspectives into health care, patient satisfaction has become a vital health care outcome. However, there is partial knowledge regarding the patient satisfaction measures being used by leading academic medical centers. The objective of their study was to determine the varieties of patient satisfaction measures used by leading academic medical centers. They organized a telephone survey of 16 leading academic medical centers across the United States to evaluate the types of patient satisfaction measures used at each institution for both outpatient and inpatient care. Among the institutions surveyed, a significantly higher percentage used for satisfaction measurement among outpatients than for satisfaction measurement among inpatients.

Kathryn A. Marley et.al(2004) expressed that Managers constantly struggle with the allocation of resources and efforts in managing the complex service delivery system called a hospital. They emphasized that managers' decisions and actions focus on two important aspects of health care where one is that "what" the patient receives as clinical or technical medical care and process performance and the other one is "how" health care services are delivered to patients. They have investigated the role of leadership, clinical quality, and process quality on patient satisfaction. They hypothesized a structural equation modeling and also assessed using a sample size of 202 U.S. hospitals. Statistical results supported the idea that leadership is a good exogenous construct and that clinical and process quality are good intermediate outcomes in determining patient satisfaction. Statistical results also suggested that hospital leadership has more

influence on process quality than on clinical quality, which is predominantly the doctors' domain. They also discussed that like hospital managers must be mindful of the fact that process quality is at least as important as clinical quality in predicting patient satisfaction.

Schoenfelder T.et al(2011) have experimented to find the Determinants of patient satisfaction by conducting a study in an in-patient setting in Germany. The objective of their study is to identify key determinants of patient satisfaction. They have collected a data by random sampling during the period of January 2009 to September 2009 through a questionnaire. A sample of 8,428 patients was contacted from Thirty-nine hospitals in Germany. They have measured Global patient satisfaction, Attributes of medical aspects of care, performance of service and different dimensions of patient expectations. Medical aspects of care and They modeled logistic regression analysis to identify determinants of patient satisfaction with the input of performance of service items. Their study revealed that the outcome of treatment was overall, the most salient predictor followed by nursing kindness as the second most important factor. Items reflecting information receiving about the undergoing procedures do not have a major impact on patient satisfaction. The findings suggest that variables measuring patients' perceptions of care are more important determinants of global patient satisfaction in comparison to demographics and visit characteristics.

ChahalHardeep.al (2013) in his study revealed that patient satisfaction is a multi-dimensional construct comprised of four dimensions, namely: physical maintenance, physician care, nursing care and internal facilities. Among the four hypothesized models, only model 2 depicting the impact of dimensions on satisfaction showed a good fit while the other three models showed either average(model 4) or poor (models 1 and 3) fit. The analysis of the models indicates that all patient satisfaction dimensions positively and significantly contributes

to patient satisfaction and which also act as an important mediating factor between the satisfaction dimensions and patient loyalty.

Rashid Al-Abri* et.al(2014) voiced that Patient Satisfaction Survey is a Tool in order to improve Quality. They expressed that there are very few published studies reporting of the improvements resulting from feedback information of patient satisfaction surveys, and in most cases, these studies are contradictory in their findings. This article explored in-depth a good amount of research studies that critically discourse the association of dependent and independent influential characteristics towards overall patient satisfaction in addition to its effect on the quality improvement process of healthcare organizations.

Ekpe EE et.al(2015) have opined that Healthcare managers now express patient centered care as a major element in the healthcare operation using patients assessment of the services provided. These surveys are regular under total quality management in developed countries. Periodic patient satisfaction surveys provide feedback to hospital management and staff regarding the quality of services provided. One of their main objective was to investigate patients assessment and satisfaction of services rendered in the University of Uyo Teaching Hospital, Uyo, using the Surgery department as a case study. They have used cross-sectional design and conducted with the surgical patients and accident and emergency (A/E) patients of the University of Uyo teaching hospital. They administered a structured questionnaire and taken 130 surgical patients using systematic random sampling method, out of which 108 completed the questionnaire/interview and were included in the study. They evaluated patients' satisfaction on overall satisfaction, services rendered at accident and emergency unit, Pharmacy, laboratories, blood bank, surgical wards, surgical outpatient department (SOPD), medical records and theatre units of the hospital etc. Conclusion: Finally they found that there is high patient satisfaction in the University of

Uyo Teaching Hospital, health workers need to be more responsive by reducing waiting time for consultation, electricity supply has to be improved and the conveniences must be kept more tidy and comfortable for patients.

Jones Akuamoah-Boateng(2019) presented a paper on patients' satisfaction and its determinants in outpatient and inpatient departments of tertiary hospitals in ghana. They considered that healthcare systems and particularly tertiary hospitals are the centre of patient care delivery and represent an organizational hub of the bigger healthcare provider network. They expressed that though there is considerable difficulty in the measurement of satisfaction, it is one of the most important objectives of any health system. They felt that both clinical and non-clinical factors influence patient satisfaction. Extensive research revealed that, there have not been studies that have focused on the influence of clinical factors (core services) and non-clinical factors (health system) on patient satisfaction is influenced in Ghana. Their study has focused on adding inpatients' service experience in measuring the level of service quality delivered by tertiary hospitals. They proposed that both clinical factors and non-clinical factors influence the satisfaction of patients who utilize the outpatient and inpatient departments of tertiary hospitals in Ghana.

Need for the study:

Patient satisfaction is one of the indispensable factor for health service improvement. To improve the quality of care it is essential to know the factors influencing the patient satisfaction. The quality of care will indicate the quality of service of the hospital as perceived by the patients regarding various factors. India has increasingly developed its health care services in response to patient needs over decades. In India, during the last decade, there was huge numbers of patients' complaints about poor health care delivery services. .Key performance indicators are used to monitor and evaluate the effectiveness and efficiencies of organizations. In

this context, the present study is carried out with reference to multi -specialty hospitals in Telangana state to explore the factors influencing patient satisfaction and to identify measures to be undertaken to enhance the level of satisfaction.

Objectives:

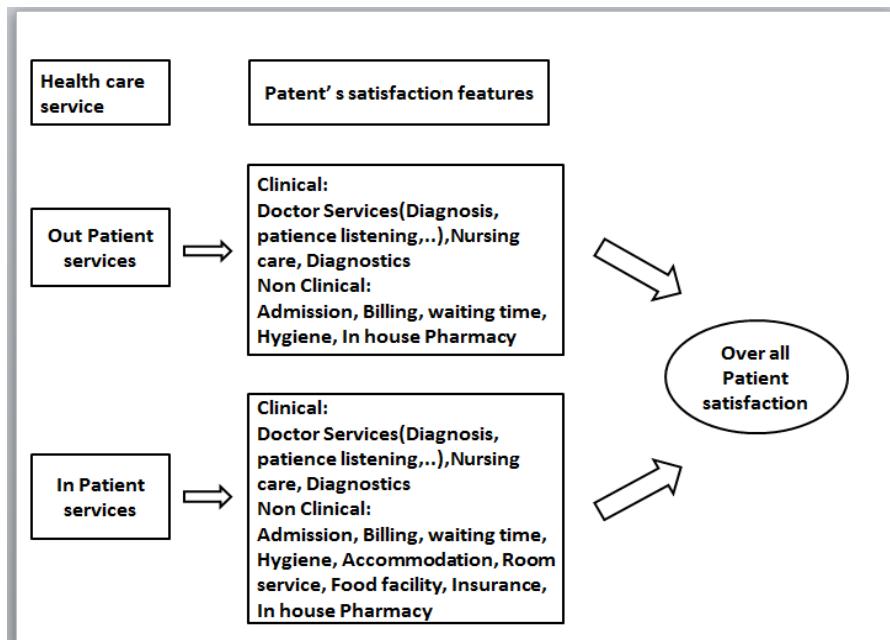
1. To study the level of satisfaction of patients with respect to facilities and environment in Multi-specialty hospitals.
2. To study the satisfaction levels of patients with respect to behaviour of doctors/nursing and supportive staff.
3. To test the satisfaction levels of patients towards doctors in diagnosis of illness.
4. To know Patient's opinion towards cost of treatment.
5. To know whether there exist any relation between two variables like income and perception towards hygiene, age and perception towards Doctor's treatment etc.
6. To find out critical factors that lead to patient Satisfaction

Methodology:

The data set used in this study was obtained as first hand data through a self-administered questionnaire during the period of May 2019 to December 2019. The survey was conducted in the state of Telangana and included all 19 hospitals of the area. Participants were recruited from different departments like cardio, general medicine, surgery, urology, neurology etc. Participation was completely anonymous and voluntary. The participants are informed about the purpose of the study and the given. Out of the total forms 500 sent, only 414 are good in filling which have been used for computations and analysis. The questionnaire consists of questions of both medical and service attributes as well as demographics.

Analysis: The conceptual model is based on the fact that patient satisfaction in health care services is

influenced by core clinical as well as non-core health delivery systems. It is assumed as a function of the sum of all experiences in relevant service category sets. It can be depicted as follows:



In the analysis part, we have taken some hypotheses for testing and factor analysis is also carried out using SPSS Software. The results are shown below:

Table 1-To test whether Patients are satisfied with the diagnosis of doctors or not, the following are descriptive statistics that we obtained:

diagnosis of doctors

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Dissatisfactory	13	3.1	3.1	3.1
	Dissatisfactory	11	2.7	2.7	5.8
	Neutral	73	17.6	17.6	23.4
	Satisfactory	266	64.3	64.3	87.7
	Very Satisfactory	51	12.3	12.3	100.0
	Total	414	100.0	100.0	

- From the above table, we can conclude that more than 75% of patients are satisfied with doctor's diagnosis.

Table 2-To test whether Patients are satisfied with the treatment of Doctors or not,the following are descriptive statistics that we obtained:

treatment of doctors

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Very Dissatisfactory	18	4.3	4.3	4.3
Dissatisfactory	18	4.3	4.3	8.7
Neutral	61	14.7	14.7	23.4
Satisfactory	178	43.0	43.0	66.4
Very Satisfactory	139	33.6	33.6	100.0
Total	414	100.0	100.0	

- From the above table, we can conclude that more than 65% of patients are satisfied with the treatment of doctor.

Table 3-To test whether Patients are satisfied with the behaviour of the nursing staff or not,the following are descriptive statistics that we obtained:

behaviour of the nurses

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Very Dissatisfactory	5	1.2	1.2	1.2
Dissatisfactory	5	1.2	1.2	2.4
Neutral	69	16.7	16.7	19.1
Satisfactory	319	77.1	77.1	96.1
Very Satisfactory	16	3.9	3.9	100.0
Total	414	100.0	100.0	

- From the above table, we can conclude that more than 80% of patients are satisfied with the treatment of nursing staff.

Table 4-To test whether Patients are satisfied with the clinic's environment or not,the following are descriptive statistics that we obtained:

Clinic Environment(Hygiene)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Very Dissatisfactory	26	6.3	6.3	6.3
Dissatisfactory	83	20.0	20.0	26.3
Neutral	129	31.2	31.2	57.5
Satisfactory	123	29.7	29.7	87.2
Very Satisfactory	53	12.8	12.8	100.0
Total	414	100.0	100.0	

- From the above table, we can conclude that only around 50% of patients are satisfied with the clinic's environment.

Table 5-To test whether Patients are satisfied with the medical expenses or not,the following are descriptive statistics that we obtained:

medical expenses

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Very Dissatisfactory	14	3.4	3.4	3.4
Dissatisfactory	99	23.9	23.9	27.3
Neutral	73	17.6	17.6	44.9
Satisfactory	193	46.6	46.6	91.5

Very Satisfactory	35	8.5	8.5	100.0
Total	414	100.0	100.0	

- From the above table, we can conclude that only around 50% of patients are satisfied with medicalexpenses.

Table 6-To find the mosy frequently visited departments, the following are descriptive statistics that we obtained:

specialty of doctor

	Frequenc y	Percent	Valid Percent	Cumulative Percent
Valid Cardiac	177	42.8	42.8	42.8
Cancer	89	21.5	21.5	64.3
kidney	90	21.7	21.7	86.0
Skin disease	17	4.1	4.1	90.1
Eye,Dental,ENT	12	2.9	2.9	93.0
Gynic	12	2.9	2.9	95.9
Liver	9	2.2	2.2	98.1
Other(diabetic,nutritio n..)	8	1.9	1.9	100.0
Total	414	100.0	100.0	

- From the above table, we can conclude that morethan 85% of patients are coming for Cardiac,Cancer and Kidney problems and also observed that some of the patients are suffering with both cardiac and kidney problems.Further study has to be made to know the associationof these two diseases.

Table 7-To find whether people prefer diagnostic tests inside or outside labs, the following are descriptive statistics that we obtained:

diagnostic tests

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid In house Diagnostics	301	72.7	72.7	72.7

Out Side Diagnostics	113	27.3	27.3	100.0
Total	414	100.0	100.0	

- From the above table, we can conclude that morethan 70% of patients prefer that to for inside diagnostics only as immediate doctor's consultation can also be done there it self.

Table 8-To find whether patients are willing to come again or not for further cure, the following are descriptive statistics that we obtained:

willingness to visit again

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	299	72.2	72.2	72.2
	No	115	27.8	27.8	100.0
	Total	414	100.0	100.0	

- From the above table, we can conclude that morethan 70% of patients prefer to visit again for further treatment or any kind of illness arises in future .

Table 9: To test whether people of different income groups are been equally taken in to sample or not, we use chi-square test as follows:

we consider

Null Hypothesis: H_0 : All income groups of people are been equally taken in to sample.

The necessary calculations are

Income

	Observed N	Expected N	Residual
below 25,000	74	82.8	-8.8
25,000-50,000	100	82.8	17.2
50,000-75,000	88	82.8	5.2
75,000-1,00,000	73	82.8	-9.8
1,00,000- 1,25,000	79	82.8	-3.8
Total	414		

Test Statistics

	Income
Chi-Square	6.169 ^a
df	4
Asymp. Sig.	.187

- As significant value (.187) is greater than 0.05, we accept Null Hypothesis and conclude that people with all income levels are equally included in the sample.

Table 10: To test whether income levels of the patients and perception towards hospital's environment are associated or not, we use chi-square test as follows:
we consider

Null Hypothesis: H_0 : Income levels of the patients and perception towards hospital's environment are independent.

The necessary calculations are

Income * Clinic Environment(Hygiene) Crosstabulation

Count

	Clinic Environment(Hygiene)					Total
	Very Disatisfactor y	Dissatisfactor y	Neutral	Satisfactor y	Very Satisfactory	
Income below 25,000	4	11	27	23	9	74
25,000-50,000	7	23	32	27	11	100
50,000-75,000	2	22	27	27	10	88
75,000-1,00,000	6	16	22	21	8	73
1,00,000- 1,25,000	7	11	21	25	15	79
Total	26	83	129	123	53	414

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	12.482 ^a	16	.710
Likelihood Ratio	12.978	16	.674
Linear-by-Linear Association	.299	1	.585
N of Valid Cases	414		

- As Pearson Chi-Square value is greater than 0.05, we accept Null Hypothesis and conclude that Income levels of the patients and perception towards hospital's environment are independent.

Table 11: To test whether patients of all age groups are been equally taken in to sample or not, we use chi-square test as follows:

we consider

Null Hypothesis: H_0 : All age groups of people are been equally taken in to sample.

The necessary calculations are

age			
	Observed N	Expected N	Residual
Young	147	138.0	9.0
Middle aged	142	138.0	4.0
Senior citizens	125	138.0	-13.0
Total	414		

Test Statistics

	age
Chi-Square	1.928 ^a
df	2
Asymp. Sig.	.381

- As significant value (.381) is greater than 0.05, we accept Null Hypothesis and conclude that people with all age groups are equally included in the sample.

Table 12: To test whether age of the patients and perception towards treatment of doctors are associated or not, we use chi-square test as follows:

we consider

Null Hypothesis: H_0 : age of the patients and perception towards treatment of doctors are independent.

The necessary calculations are

age * treatment of doctors Crosstabulation

Count	treatment of doctors		Total

	Very Dissatisfactor y	Dissatisfactor y	Neutral	Satisfactor y	Very Satisfactory	
age Young	6	10	20	57	54	147
Middle aged	10	3	18	68	43	142
Senior citizens	2	5	23	53	42	125
Total	18	18	61	178	139	414

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	12.251 ^a	8	.140
Likelihood Ratio	12.593	8	.127
Linear-by-Linear Association	.142	1	.706
N of Valid Cases	414		

As Pearson Chi-Square value is greater than 0.05, we accept Null Hypothesis and conclude that age of the patients and perception towards treatment of doctors are independent.

Table 13: To find the important components that lead to patients' satisfaction, applied Factor Analysis and presented key results:

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.688
Bartlett's Test of Sphericity	Approx. Chi-Square df	440.800 55
	Sig.	.000

- As KMO is greater than 0.5, Factor analysis can be used
- Bartlett's Test of Sphericity p value is 0.000 which is less than 0.05, we can reject the null hypothesis that the correlation matrix is insignificant.

Total Variance Explained

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.142	19.475	19.475	2.142	19.475	19.475	2.044	18.583	18.583
2	2	1.897	17.243	39.718	1.897	17.243	39.718	1.969	17.900
3	3	1.321	12.006	52.724	1.321	12.006	52.724	1.486	12.240
4	.903	8.206	56.929						
5	.882	8.022	64.952						
6	.763	6.934	71.886						
7	.710	6.456	78.341						
8	.670	6.087	84.428						
9	.631	5.733	90.161						
10	.572	5.196	95.357						
11	.511	4.643	100.000						

➤ As first three components are only explaining more than 50 % of total variance, we continue with three factors

Rotated Component Matrix^a

	Component		
	1	2	3
V2 Proper diagnosis		.688	
V3 Inhousediagnostics			.697
v5 multi specializations			.642
v6 nurses care	.674		
v8 clarity about procedures	.680		

v9 patience listening		.674	
v11 inpatient	.791		
v12 insurance	.690		
v13 hygiene		.695	
v16 procedures ,treatment		.722	
v20 inhouse pharmacy			.634

- Each variable loading in each of the components.

Descriptive Statistics

	N	Minimu m	Maximu m	Mean	Std. Deviation
Good Inpatient facility	388	2.00	7.00	4.5638	1.12810
Procedures and treatment	388	1.25	6.75	4.0198	1.17950
Multi facilities	388	2.33	7.33	4.5683	1.13045
Valid N (listwise)	388				

- From the above table,we conclude that Multi facilities is the main factor, Good Inpatient facility is next best and Procedures and treatment stands next to them

Conclusion:

Patients play an important role in the health care quality measure. Various demographical and other characteristic such as age, income levels and different treatment experience would have different effect on patient satisfaction. This study revealed that major determinants for patient satisfaction in multi speciality hospitals are Doctor's diagnosis,Nursing staff kindness, procedures.Insurance is also one of the main factor to prefer multi speaiality hospitals.Clinic

environment has to be improved.Further research can be done to understand each and every patient expectation and strive to make the patients happy by optimizing the services for every patient every time.

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