Study of Customer Perception on the Service Quality Parameters of Hospitals with Respect to Nagpur Region

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Abstract
Introduction: This research was conducted as a part of the study of impact of Supply Chain and Logistics practices on organisational performance. Better organisational performance contributed to more satisfied customers. There are different attributes that define the satisfaction of customers. Those that are the direct or indirect outcomes of the Supply chain practices of strategic supplier partnership practices, IT adoption etc. is considered for this study. This Paper attempts to study the perception of customers on the quality of services provided by the multispecialtyhospitals in Nagpur city. Overall ten parameters were identified as the determinants of the service quality of the hospitals.
Research methodology: The population of this study was the customer base of the private multispecialty hospitals of Nagpur City. Sample size was 550 respondents identified through cluster and convenience sampling. It was assumed that customers are neither highly satisfied nor highly dis-satisfied with the service quality offered to them by the hospitals. Chi-Square test for Goodness of Fit was used to test the hypothesis made.
Conclusions: Hospitals in Nagpur region are patient centric and give individual attention to its patients. They are called for regular follow-ups.Medicines are readily available in the pharmacy/ medical stores. But the hospitals lag in identifying future expectations of the customers.
Keywords: Service Quality, Customer Satisfaction, Satisfaction Evaluation, IT Adoption.

Introduction:

When it comes to the service sector in India, healthcare is one of the largest and sectors, both in terms of revenue and employment. Healthcare sector in India comprises hospitals, medical devices, clinical trials, outsourcing, telemedicine, medical tourism, health insurance and medical equipment. The Indian healthcare sector is growing because of its services and increasing expenditure by public as well private players. Also people are becoming more health conscious and are ready today more to get a better health. Coming to the state of Maharashtra, Nagpur is an important health care hub for most of the population of the Vidarbha region of the state. Nagpur city's health care facilities presently cater to the needs of the a strong population of Vidarbha region. It is also catering to the health care needs of the adjoining states of Madhya Pradesh and Chhattisgarh. There is no other city in a 300 km radius that could provide good medical facilities; the city provides anexcellent opportunity for health care establishments/corporate hospitals. Thehealthcare industry already has a substantial presence in the city.with around and the numerousmedical colleges ensure an easy supply of trained manpower to the industry.The presence of an international airport in the vicinity can ensure easy access to thefacilities to patients from all over the world. Nagpur can potentially attract medicaltourists if not from all over the world but certainly from countries in the South Asiaand the Middle East(Mohite).

Literature Review:

(Asghar Zarei, 2012)According to the findings from the study of "Service quality of private hospitals: The Iranian Patients' perspective", the quality improvement efforts of private hospitals is advised to mostly focus on modernizing equipments, timeliness of care delivery, accuracy of performance as well as on enhancing the interpersonal relationships and communication skills of its physicians, nurses and other personnel.

(Dave, 2014)"A study on Service quality and customer satisfaction of selected Private hospitals of Vadodara City" concluded that health care service providers should disseminate correct information from time to time as more quality information leads to patient awareness and satisfaction. The hospitals should have convenient operating hours and nurses should give individual attention to the patients.

Objectives of the Study:
1. To identify the parameters that defines the service quality of the hospitals.

Every customer has a different set of requirement from the services they render from the hospitals. May it be cost effectiveness, availability of medicines in the pharmacy, customer feedback, satisfaction evaluation etc. The primary objective of this paper was to find out the basic parameters that are the determinants of the service quality of hospitals.

2. To find the perception of the customer towards the service quality parameters of the hospitals.

Level of satisfaction of the customers on the quality of services is different with respect to the type of service being taken, type of hospital, infrastructure etc. The other objective of this study is to know the perception of the customers on various service quality parameters.

Hypothesis:
H0: There is no significant difference between the agreement and disagreement of the customers on the 10 service quality parameters (listed below) for the hospitals.

The above hypothesis is framed assuming that the customers in the Nagpur region are neither highly satisfied nor dis-satisfied with the service quality of the hospitals. The customers have a very neutral view about the quality of services being delivered to them may it be the devices and equipment for tests and check, Registration, billing and information sharing through electronic medium or calling the patients for regular follow -ups.

The 10 parameters of the service quality are as follows.
1. All patients related departments had enough devices and equipments for tests and check.
2. Prescribed drugs were readily available at the medical stores.
3. Medicines at the medical stores had sufficient expiry dates.
4. Medical records related to the patients were given to the patient at the time of discharge.
5. Registration, billing and information sharing was through electronic medium.
6. The building environment and lay-out is patient centered.
7. Hospital measured and evaluated patient's satisfaction.
8. Hospital determines customer future expectation.
9. Emergency equipment like oxygen cylinders, ventilators were available for the patients.
10. Post treatment patient was called for regular follow-ups

Population and Sample Size:
i. For the study, population was the customer base of Nagpur Region. The definition of Nagpur region is Nagpur City and not the complete Nagpur district. In this study, the samples were taken from the customers who were the direct or indirect users of the service firms (private Multispecialty Hospitals) that were put to study in this research. The size of this sample was 550 respondents.
ii. The sampling method used was cluster sampling followed by convenience sampling. Clusters of the customers for the multispecialty hospitals were first made. Customers from these clusters were selected by the convenience method of sampling,

Method of Data Collection
✓ Data collection was done through as structured questionnaire comprising of 10 questions related the service quality of hospitals.
✓ The item scales are five-point Likert type scales with 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5=strongly agree, 6=not applicable. Note: Items marked by an asterisk were removed in the final instruments.

Data Analysis:

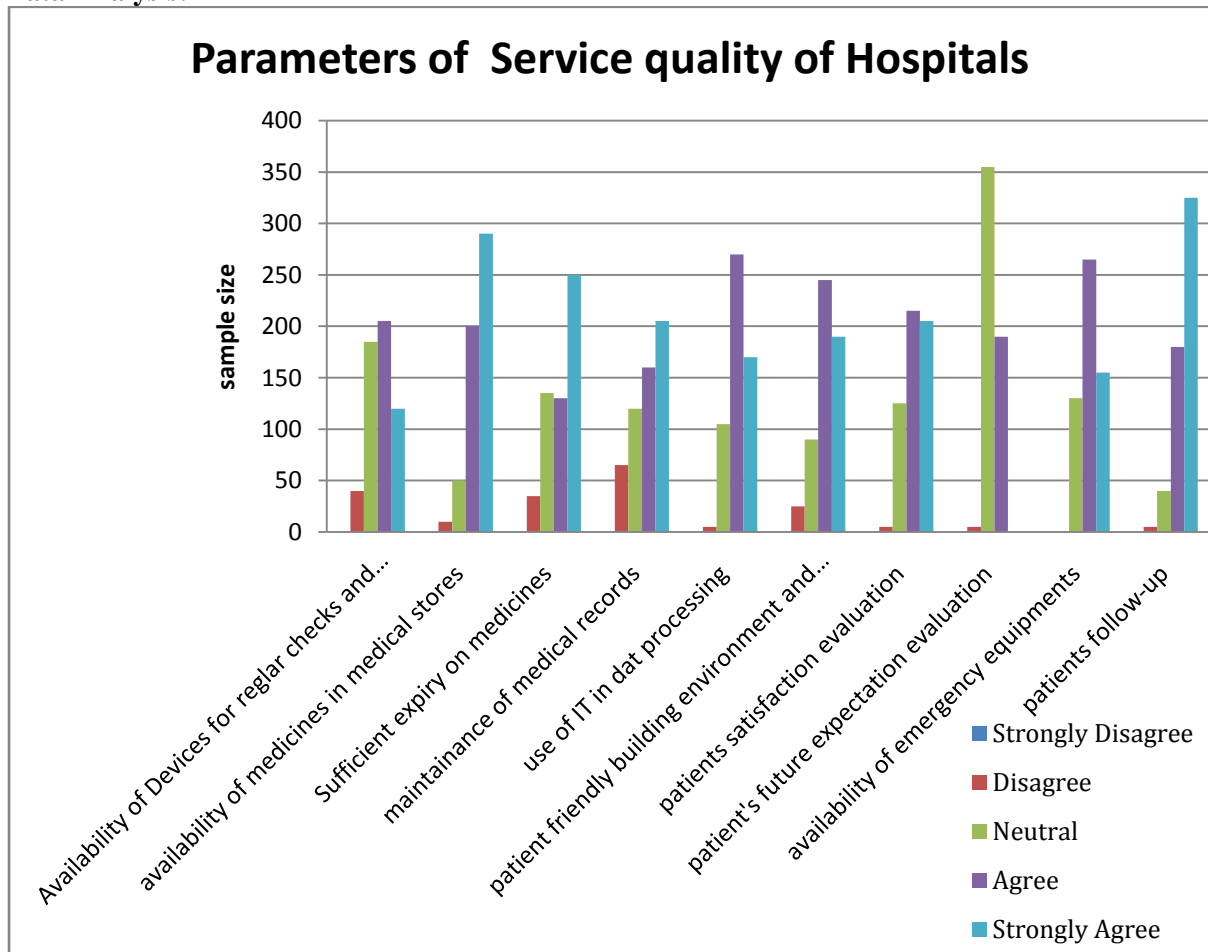
Figure 1: Reponses of customers on the service quality of hospitals

The above figure shows the consolidated responses on the agreement or the disagreement to the service quality parameters of the hospitals in Nagpur city. It can be seen that the level of disagreement is strong for none of the parameters taken in the study. Maintenance of medical record and availability of devices for regular checks and tests are the two parameters for which the customers have a moderate level of dissatisfaction. On the aspect of patient's future expectation evaluation, customers have shown a neutral view as they do not find the hospitals giving any preference to their future needs. Level of satisfaction was seen higher for patients being called for regular follow-ups, availability of medicines in the medical stores, and sufficient expiry dates on the medicines. This contributes to the understanding that the organisations had a good suppliers relation for the procurement off pharmaceutical products.

Hypotheses Proofs of Service Quality Parameters:

Table 1: Hypotheses proofs using Chi-square method for 10 service quality parameters

	Parameters of Service quality of Hospitals	D	A	p value		Rejecting/ Accepting Null Hypothesis
1	Availability of devices and equipments for tests and check	41	59	0.0565	p value > α	Accept H_0
2	Prescribed drugs were readily available at the medical stores	11	89	0.0000	p value< α	Reject H_0
3	Medicines at the medical stores had sufficient expiry dates	31	69	0.0001	p value< α	Reject H_0
4	Medical records related to the patients were given to the patient at the time of discharge	34	66	0.0006	p value< α	Reject H_0
5	Registration, billing and information sharing was through electronic medium	20	80	0.0000	p value< α	Reject H_0
6	The building environment and lay-out is patient centred	21	79	0.0000	p value< α	Reject H_0
7	Hospital measured and evaluated patients satisfaction	24	76	0.0000	p value< α	Reject H_0
8	Hospital determines customer future expectation	65	35	0.0012	p value< α	Reject H_0
9	Emergency equipments like oxygen cylinders, ventilators were available for the patients	24	76	0.0000	p value< α	Reject H_0
10	Post treatment patient was called for regular follow-ups	8.2	92	0.0000	p value< α	Reject H_0

D-Disagreement, A- Agreement

Statement 1: All patients related departments had enough devices and equipments for tests and checks.
In this case the null hypothesis was accepted. This means that customers had equal amount of agreement and disagreement for the availability of devices and equipmentsfor checks. Almost half the hospitals fail to have all the required equipments that arerequired for regular checkups.

Statement 2: Prescribed drugs were readily available at the medical stores.
In this case the null hypothesis is rejected. This means that customers did not haveequal degree of agreement and disagreement on availability of medicines in themedical stores. And from the data is observed that almost 90 % customers agree thatthe medicines are readily available at the medical stores of the hospital.

Statement 3: Medicines at the medical stores had sufficient expiry dates.
In this case the null hypothesis is rejected. This means that customers did not haveequal degree of agreement and disagreement on the sufficient expiry dates of theavailable medicines in the medical stores. The data shows that 70% customers agreethat medicines have sufficient expiry dates.

Statement 4: Medical records related to the patients were given to the patient at the time of discharge
For the above statement, the null hypothesis is rejected. This means that customersdid not have equal degree of agreement and disagreement on the medical recordsmaintenance and handing over to the patients. And the data shows that almost 67%customers agree that the data related to patient is handed over at the time of discharge.

Statement 5: Registration, billing and information sharing was through electronic Medium
In this case the null hypothesis is rejected. This means that customers did not haveequal degree of agreement and disagreement on use of electronic medium for dataprocessing. The data shows that 80% customers agree that hospitals have data storage,processing and sharing done through electronic medium.

Statement 6: The building environment and layout is patient centred.
In this case the null hypothesis is rejected. And the data shows that almost 80 %customer agrees that the hospitals have a patient friendly environment and patientcentric layout.

Statement 7: Hospital measure and evaluate customer satisfaction.
In this case the null hypothesis is rejected. And the data collected shows that 77 % customers find the hospitals serious enough to know customer requirements andmeasure their satisfaction levels.

Statement 8: Hospitals determine customer's future expectations.
In this case the null hypothesis is rejected. Which means that customers don't havesame amount of agreement and disagreement for the hospitals on knowingcustomer's future expectations. But the data shows that only 35 percent customersbelieve that hospitals identify their future requirements. And 65% customers believe that hospitals do not identify their future needs.

Statement 9: Emergency equipments like oxygen cylinders, ventilators were available for the patients
For the above statement, the null hypothesis is rejected. And the data collected showsthat 77% customers believe that the emergency equipments are available at thehospitals in the time need.

Statement 10: Post treatment patient is called for follow-up.
In this case , the null hypothesis is rejected and the data collected shows that 92 %customers agree that the hospital calls the patient for the follow-up after the treatmentis over.

Conclusions:
After the study conducted to find the customer perception on the service quality of hospitals in Nagpur region, it was observed that patients perceived the overall service quality as satisfactory. Hospitals in Nagpur region are patient centric. The major focus of the hospitals is definitely on its customers. They give individual attention to its patients. Patients were also satisfied with the parameter of being called for regular follow-ups. This can be contributed towards the proper information flow by the organization to the customers. The information movement to and from the patient and the organization is limited. Respondents had to say that the complete information relating to the patient is not communicated to them.

Since the hospitals have focus toward the strategic partnership with the suppliers of pharmaceutical products, medicines are readily available in the pharmacy/ medical stores. But the hospitals lag in identifying future expectations of the customers with respect to the health care costs.Healthcare sector in Nagpur region have inefficient organization structure. This can be contributed to the Human Resources having multiple roles and responsibilities, under payments, work stress etc.

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