Service quality in healthcare sector in North and South zones of Gujarat

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Abstract

The health care sector of any country depends on socio economic development and the government's priority for the same. Since India has followed the mixed economy the health care sector also has mixed participation Government and Private. The house hold spending on private healthcare is more than on public spending. Gujarat is growing fast in economic development. In growing competition service quality is becoming very important. The research study has been conducted to find effect of service quality on patients'satisfaction and customer loyalty.

Key Words: Service quality, patient satisfaction, hospital services.

Introduction

The medical care varies across countries and it depends on the socio-economic and political forces in a given society. Although there is great variety in provisioning, broadly there are three major types. First, there are countries where the state plays a central role in the finance, provision and administration of services but at the same time private interests in the form of individual practice, hospitals and other supportive services coexist. Second, there are countries where the state is the sole provider of medical care and no private interests are allowed. Third, there are countries which rely largely on the market for the provisioning of services.

Prior to the growth of allopathic medicine, during the nineteenth century, medical care was largely a private activity in the household and the community. During this period, in most developed and developing countries healers who had some formal training, treated wealthy patrons while the treatment of ordinary people remained in the hands of a number of lay practitioners who used traditional and magical remedies.

Accounts of medical practice in most Western countries during the pre-industrial period show that it was an empirical art aimed more at consoling the ill than curing them. Apart from treatment at home, medical relief was mainly dispensed by apothecaries, barber surgeons and lay practitioners who used a variety of herbs and folk remedies. While these various healers offered remedies for specific complaints, there were no cures for a host of infectious diseases which were major killers of the times. The art of surgery was also poorly developed and was a bloody process. A study of medical practice before the nineteenth century in America reveals that treatment of illnesses was, practiced in three spheres with almost equal importance. These included the medicine of the domestic household, physicians and lay healers.

Healthcare in India:

The origins of private practice can be traced to the seventeenth century with the establishment of the East India Company, following which European doctors were employed on a regular basis in India. Originally the company engaged the services of British doctors designated as 'surgeons' mainly for ships which were bound for India. Later, some doctors were asked to remain in India on special request from the merchants. By the late seventeenth century, surgeons were hired and the East India Company started employing medical men to treat their resident European employees. East India Company started treating their employees with trained medical personnel.

In India, indigenous systems like Ayurveda, Unani and Siddha were largely the domain of individual practitioners who provided services for a price which was paid mostly in kind. Kings relied on Ayurvedic practice during the nineteenth century. The rest of the population depended on a variety of healers and paid for their services. The state played a minimal role in assuming responsibility in providing services to the people.

India's healthcare system rests on a primary healthcare system that is grossly inadequate and falls woefully short of what it should be to ensure that our people have access to at least basic healthcare. According to the Economic Survey 2009-10, only 13 per cent of the rural population has access to a primary healthcare center with 33 per cent having access to a sub-center, 9.6 per cent to a hospital and 28.3 per cent to a dispensary or clinic. India has a rudimentary network of public hospitals – there is a shortage of 4,504 primary health centers and 2,135 community health centers in 2009.

India also carries the world's largest burden of maternal, newborn and child deaths. At the beginning of this Millennium in year 2000, 189 countries and 23 international health agencies had pledged to reduce child under-5 mortality by two-third (Millennium Development Goals 4) and to reduce maternity mortality by three-fourths (Millennium Development Goal 5) by 2015.

Health Profile of Gujarat

Gujarat state accounts for 6% of the area of the country and 5% (51 million) of the population of India making it rank tenth in the country. Gujarat is divided into 226 blocks, 18,618 villages, and 242 towns. The decadal population growth rate (1991-2001) of the state has been 22.6%, which is higher than that of India (21.5%). Gujarat is one of the most urbanized states in India, with 37% urban population. Gujarat has been ranked third in the country in terms of growth during the 10th five year plan (2002-2007). The state has registered an overall Gross State Domestic Product (GSDP) growth rate of 12.99 percent. Gujarat has remained among the top three of the 15 largest states in India in attracting industrial investments all through the 90s and the early part of this decade. Based on the wealth index, the state of Gujarat is prosperous. Almost one-third of Gujarat's households (56% of urban households and 15% of rural households) are in the highest wealth quintile, compared to one-fifth of households in India. Only 7 percent of households in Gujarat (1% of urban households and 12% of rural households) are in the lowest wealth quintile.

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The World Health Organization (WHO) as "the state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity" has defined health care. Health care remains one of the most important human endeavours to improve the quality of life. It also provides a comprehensive definition of a health care system as one of that "...encompasses all the activities whose primary purpose is to promote, restore or maintain health....and include(s) patients and their families, health care workers and caregivers within organizations and in the community and the health policy environment in which all health related activities occur."

The main objective of any healthcare system is to facilitate the achievement of optimal level of health to the community through the delivery of services of appropriate quality and quantity. One another objective of health reform worldwide is to hold healthcare accountable for its resource use and the way healthcare services are delivered. This relates not only to the overall health of individuals and communities but to the quality of the healthcare experience **(Reinhardt, 1998)**.The structure of the health care system in India is complex and includes various types of providers. These providers practice in different systems of medicines and facilities.

The providers and facilities in India can be broadly classified by using three dimensions: ownership styles (public, private not –for profit, private for-profit and private informal);systems of medicines (allopathic, homeopathic and traditional); and types of facilities (hospitals, dispensaries and clinics). These dimensions are interdependent and overlapping **(Bhat,1993)**.

The level of competition has increased in health care sector. Patients' satisfaction is emphasized highly in competitive market. Patient satisfaction with medical care is a multidimensional concept, with dimension that corresponds to the major characteristics of providers and services. Patient satisfaction with health care services is considered to be of paramount importance with respect to quality improvement programs from the patients' perspective, total quality management, and the expected outcome of care. Within the health care industry, patient satisfaction has emerged as an important component and measure of the quality of care. Consumer satisfaction appears to be a major device in order to take

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Bhat , R.(1993). The private/public mix in health care in India. Health Policy and planning,8(1),43-56.

services **(Gilbert, Lumpkin &Dant, 1992)**. Therefore, service providers, as a matter of fact, take the satisfaction of customers into account as a main goal of the strategies of their firms **(Zeithaml&Bitner, 2000)**. Patient satisfaction plays an important role in continuity of service utilization. Satisfied patients are more likely to adhere to doctors' recommendations and medical suggestions.

Besides, dissatisfied patients do not use that health care services. The fast developing health care industry, hospitals like their counterparts, have to deal with several service product characteristics such as intangibility, heterogeneity and perishability more over high risk exist for the private hospitals offering their services in a competitive environment dealing with human health, which involves sensitive decision.

RituNarang (2010)applied 20-item scale and distributed to 500 users of health care centers comprising a tertiary health center, a state medical university and two missionary hospitals in Lucknow, India. The scale was found to be reliable to a great extent with an overall Cronbach alpha value of 0.74. "Health personnel and practices" and "health care delivery" were found to be statistically significant in impacting the perception. Respondents were relatively less positive on items related to "access to services" and "adequacy of doctors for women". The tertiary health center was rated poorer than the medical university and missionary hospitals.. Policy makers need to consider the requirements and opinions of patients to effect substantial change and significant improvement in the quality of their health care services for better and increased utilization of their services. The access to health care services requires immediate and urgent attention from the policy makers. In addition, they need to improve upon the number of rooms, reception and follow-up facility along with availability of drugs and doctors for women. This tool may be applied for qualitative assessment of the services of health care programmes as well as health care centres of India.

Patient satisfaction had been extensively studied and considerable effort had gone into developing survey instruments to measure it. However, most reviews have been

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critical of its use, since there was rarely any theoretical or conceptual development of the patient satisfaction concept. **Anjali Patwardhan (2009)** tried to find effectiveness of consumer surveys as valuable to implement service improvement tool in health services. In the recent climate of consumerism and consumer focused care, health and social care needs to be more responsive than ever before. The consumer needs and preferences can be elicited by customaries and specific consumer surveys. Most researchers now go for consumer experience surveys rather than just satisfaction surveys because of their clear superiority in identifying the specific opportunities for improvement and the ease of translating the outcome information from these surveys in to the strategic planning for improvement.

Amira Elleuch (2008)tried to measure patient satisfaction in Japan. Japanese healthcare service quality was evaluated using its process characteristics (patient-provider interaction) and physical attributes (settings and appearance). Process quality attributes found experience patient satisfaction. Satisfaction in turn predicts

patient intentional behavior (to return and to recommend). Japanese society cultural specificity seems to be an interesting background to understand Japanese evaluation when patients assess health service quality. In accordance with their culture's specificities, Japanese outpatients focus on delivery processes – characterized by service speed, quality of interaction with staff and the setting's appearance when assessing health care service quality. In contrast with

SandipAnand(2010)carried out the follow-up survey in Tamil Nadu, Maharashtra, Bihar and Jharkhand. Dimensions include: service proximity, doctor availability, waiting time, medicines, facility cleanliness, dignified treatment, privacy, service affordability and treatment effectiveness. Findings indicated that doctor availability, waiting time, cleanliness, privacy and affordability at private health facilities enhance the probability that a health facility will be used for any reproductive health purpose. Their findings indicated that doctor availability, waiting time, cleanliness, privacy and affordability enhance private reproductive health service use at the combined four state level. At the combined states, medicine availability and treatment effectiveness at public health facilities enhances use. It appeared from their findings that service quality norms were not properly established in any Indian public or private systems.

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Research Methodology:
Quality of health care is the most optimal degree of health outcomes by delivery of cost effective andefficient professional health services to people. Hence, this study has focused the service quality perception of consumers from health care service providers. **Amira Elleuch(2008)**tried to measure patient satisfaction in Japan. Japanese healthcare service quality was evaluated using its process characteristics (patient-provider interaction) and physical attributes (settings and appearance). Process quality attributes found to be patient satisfaction antecedents. Satisfaction in turn predicts patient intentional behaviour (to return and to recommend). Japanese society cultural specificity seems to be an interesting background to understand Japanese evaluation when patients assess health service quality.

Quality of health care is the degree of the most optimal degree of health outcomes by delivery of effective, efficient and cost-benefit professional health services to people and communities.

Objectives of the study
· To examine perception of customer towards private hospitals.
· To analyze factors affecting selection of private hospitals by customers.
· To examine impact of perceived service quality on consumer loyalty.

Hypothesis
1. There is noassociation betweenboth the zones for selection of hospitals.
2. There is no association between zone (North and South) and awareness regarding for selected private hospitals of North and South zones.
3. Factors influencing selection of hospitals in both zones are not same.
4. Expectation and perception do not influence customer satisfaction

Population of the study

The population considered for present study is all persons of NorthGujarat state and South Gujarat who was admitted in the private hospitals or those who had taken treatment from private hospitals. The sample was drawn from four cities of Gujarat, chosen carefully for their widely accepted characteristics. These cities are:

- **Vadodara**
- **Surat**
- **Himmatnagar**
- **Vishnagar**

Sample size

From each selected hospital one hundred (100) respondents are selected using "non probability convenience sampling and their interview weretaken.Thusthe sample size for the study turned out to be 406.

Data Collection Method

In present research, personal survey method was used for data collection.

Data Collection Instrument

The data collection instrument used in this study was structured, closed ended questionnaire. The questionnaire also contains questions to measure service quality in private hospitals.Minor modifications were made to the wording of the 23 SERVQUAL items and four items relating to access and credibility taken from Parasuraman, Zeithmal and Berry (1985) were added.Here twenty three (23) statements were asked to respondents, first to know their expectation and then their perception. The statements were divided into five dimensions of service quality which are "Tangibility", "Reliability", "Responsiveness", "Assurance" and "Empathy".

Tools and procedure for Analysis:-

A service quality measurement model that has been extensively applied, is the SERVQUAL model developed by Parasuraman.

The collected data (response of the selected respondents) were finally entered in Micro Soft Excel and data sheet (master chart) was made in SPSS. Following statistical tests / techniques were applied for the study :

1) Uni – Variate Analysis : in form of Frequency tables

2) Bi – Variate analysis using Cross – tabulation with Chi-Square test

3) Paired t-test

4) Pearsons correlation Analysis

Data analysis and findings:

Consumer's perception is the main indicator of quality in health care service. Quality of health care is the most optimal degree of health outcomes by delivery of cost effective and efficient professional health services to people. The basic objective of the present study is to focus the service quality perception of consumers from health care service provider. The primary data are collected from selected private hospitals of Gujarat from South and North zones.

Table – 1 : Following table shows city wise frequency distribution of respondents.

City	Frequency	Percent
Surat	103	12.7
Vadodara	100	12.3
Visnagar	103	12.7
Himatnagar	100	12.3
Total	406	100.0

In present study out of 406 respondents, 12.7 per cent respondents were from Surat and Visnagar whereas 12.3 per cent were from Himatnagar and Vadodara. Thus it can be observed that there were equal proportion of respondents in present study.

Table: 2 Decision makers of hospital selection

It is important to find the decision makers for hospital services. Respondents were asked who influences much on hospital selection decision.

Ho: There is no association between zone (North and South) and Decision makers for selection of hospitals.

Zones	Decision of choosing the hospital				Total
	Self	Spouse	Joint	Family	
North	69	18	30	86	203
	34.0%	8.9%	14.8%	42.4%	100.0%
South	72	19	30	82	203
	35.5%	9.4%	14.8%	40.4%	100.0%

Table : 3 Chi-Square Tests			
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The above table shows that family (86 per cent and 82 per cent respectively) has the great influence on hospital selection decision followed by self decision(69 percent and 72 percent respectively).

Chi-Square test is applied to test the hypothesis. Table value is higher than calculated value 0.980>0.186). Here Ho is accepted, It can be concluded that There is no association between zone (North and South) and Decision makers of hospitals selection.

Table – 4 : Source of information about the hospital

To find major source of information on healthcare service providers, respondents were asked on sources of information about hospital.

Ho : There is no association between zone (North and South) and awareness regarding selected private hospitals of North and South zones.

Zone	Know about hospital					Total
	Advertisement	Family	Friend	Family Doctor	Any other	
North	26	99	47	18	13	203
	12.8%	48.8%	23.2%	8.9%	6.4%	100.0%
South	28	92	53	17	13	203
	13.8%	45.3%	26.1%	8.4%	6.4%	100.0%
Total	54	191	100	35	26	406
	13.3	47	24.6	8.6	6.4	100

Table 5 chi square for sources of information

	Value	df	P-value
Pearson Chi-Square	30.904	12	0.002

The above table shows that family was found major source of information in both the zones (48.8 percent and 45.3 percent respectively). The second major source of information was found friends in north as well as south zones(23.2 percent and 26.1 percent respectively)

Chi-Square test is applied to test the hypothesis and to associate relationship between zones. The above table-5 shows table value is less than calculated value(0.002<30.904). Here Ho is rejected, It can be concluded that there isassociation between zone (North and South) and awareness regarding for selected private hospitals of North and South zones.

Factors influencing choice of hospitals:

To analyze and understand the criteria for hospital selection. Respondents of both the zones were asked to rate the criteria for selection of hospitals from least preferred to highly preferred. The Chi square test is applied to find relationship between both zones factors of selection of private hospitals.

Ho: Factors influencing selection of hospitals in both zones are not same.

Table -6 criteria of hospital selection

Sr.no	Factors influencing choice	Calculated value(X^2)	Table Value (X^2)
1	Doctor's qualification	0.614	0.893
2	Doctor's experience	0.391	0.983
3	Reputation of hospitals	0.220	0.994
4	Hospital facilities	0.242	0.971
5	Recommended by others	0.239	0.993
6	Proper diagnosis/ guidance by doctors	0.168	0.983
7	Ambience of hospitals	0.667	0.955
8	Extra facilities	0.977	0.913
9	Location of hospitals	0.316	0.957
10	Troma/emergency services	0.609	0.962
11	Recommended by doctors	0.430	0.980
12	Information by doctors	0.360	0.986
13	One click access	0.362	0.948
14	Food and accommodation to relatives	0.957	0.916
15	Neat and tidy	0.560	0.905
16	Easy payment system	0.676	0.879

To find the relationship between zones i.e. north and south and factors of selection of hospitals Chi-Square test is applied. Table-6 depicts that variable no1 to 7, 9to 13 and 15, 16 table value is higher than calculated value. Ho is accepted and it can be said that that factors influencing selection of hospitals in both zones were not same. Whereas in case of variable no 8 and 14 table value of X^2 is less than computed value so Ho is rejected. It can be concluded that preference for extra facilities and food and accommodation to relatives in both regions are same.

Patients' loyalty:

Customer retention is becoming challenge and important aspect before service providers. A question was asked to find patients' loyalty for selected hospitals of South and North Gujarat. Respondents were asked would prefer same hospital again in future if needed.

Ho: There is no association between zones (North and South) and willingness to come again same hospital.

Table -7 frequency distribution of repurchase of same services (patients' loyalty)

Zones	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
North	11	7	12	20	153
	5.4	3.4	5.9	9.9	75.4
South	11	25	21	21	125
	5.4	12.3	10.3	10.3	61.6
Total	22	32	33	41	278
	5.4	7.9	8.1	10.1	68.5

Table -9 chi square for repurchase of same services (patients' loyalty)

Chi-Square Tests			
	Value	df	P-value
Pearson Chi-Square	15.424	4	.004

Table 8 depicts that majority of respondents of both the zones i.e. north and south strongly agreed that they would prefer same hospitals if needed in future.

The above mentioned table-9 shows that table value of X^2 is higher than calculated value(15.424>0.004). So Ho is rejected. There is association between zones (North and South) and willingness to come again same hospital.

Recommend to others:

Again to conform customer loyalty, respondents were asked whether they would recommend to others same hospitals.

Ho: There is no association between selected zones and their recommendations to other the same hospitals.

Table-10 frequency distribution on recommendation to others

Zones	Stronglydisagree	Disagree	Neutral	Agree	Strongly agree
North	17	9	12	33	132
	8.4	12.8	5.9	16.3	65
South	16	26	33	34	94
	7.9	12.8	16.3	16.7	46.3
Total	33	35	45	67	226
	8.1	8.6	11.1	16.5	55.7

Table -11 chi square on recommendation to others

Chi-Square Tests			
	Value	df	P-value
Pearson Chi-Square	24.492	4	.000

The above mentioned table shows that table value of X^2 is higher than calculated value (24.492>0.000). So Ho is rejected. It can be said that there is association between selected zones and their recommendations to other the same hospitals.

Table-12 Relationship between Expectation, Perceptions, satisfaction and exp-per ratio.
Satisfaction depends on expectation and perception. The SERVQUAL model is applied to study expectation and perception of patients of private hospitals.
Ho: Expectation and perception do not influence customer satisfaction

Parameters	Zones	Mean	Std. Deviation	Std. Error Mean
Perception	North	105.65	11.907	.836
	South	105.03	12.451	.874
Expectation	North	107.71	9.726	.683
	South	107.70	9.663	.678
Exp_Per Ratio	North	9.80013E1	5.560338	.390259
	South	9.74063E1	6.355121	.446042
Satisfaction	North	13.0099	3.19652	.22435
	South	11.7241	3.74863	.26310

Table-13 t-test on Relationship between Expectations, Perceptions and satisfaction

Parameters	t	Df	P value
Perception	.513	404	.608
Expectation	.010	404	.992
Exp_Per Ratio	1.004	404	.316
Satisfaction	3.718	404	.000

Here p value <0.05 therefore Ho is rejected and we may conclude that there is significant difference between satisfaction of North and South Zones. It can be also inferred from the above table that percetions, expectation and Exp_Per ratio are same in both the zones.

Table- 14 Relationship between perception, expectation, exp-per ratio and satisfaction.
Pearsons correlation test is applied to check the relationship between perception, expectation and satisfactions.

Parameters	Values	Expectation	Satisfaction	Exp_Per Ratio
Perception	Pearson Correlation	.835**	.541**	.671**
	P-value	.000	.000	.000
	N	811	811	811
Expectation	Pearson Correlation		.212**	.157**
	P-value		.000	.000
	N		811	811
Satisfaction	Pearson Correlation			.688**
	P-value			.000
	N			811

The above table reveals that there is highlypositive correlation between perception and expectation(0.835).There is a correlation between exp-per ratio, expectation and perception. Satisfaction also has positive correlation with exp-per ratio.

Conclusion:

The results showed that SERVQUAL is a valid, reliable, and flexible instrument to monitor and measure the services quality in private hospitals of Gujarat and enables the hospital managers to identify the areas that needimprovement from the patients' perspective. The results could be used in the planning for quality improvementby private hospitals. It is found that majority of the times decision regarding selection of hospital is taken by family in both the regions. The findings have proved that the positive word of mouth is power tool for increasing market share.It was also found that doctors experience, hospitals reputation, location of hospital, facilities being provided by hospitals, perfect information given by doctors and hospitals, laboratory and other facilities provided under one roof and easy payment system are the major factors which influence choice of hospitals. The research study found that majority of respondents agreed that they would prefer to come to same hospital if needed in future and they would recommend it to others also. There are certain expectations which are not yet met by private health service providers. It can be concluded that there is correlation between perception and expectation. It can be further concluded that satisfaction level in both zones i.e. north and south were found different.

The study suggests that healthcare service providers should more concentrate on service quality. Positive word of mouth is an important factor of hospital selection.

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