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Innovative Approach to Patients Satisfaction: A Case of Indian Private Hospitals

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1. Introduction

India is considered a good health care network available in both rural and urban area of the country. The important component of the value chain in Indian Healthcare industry rendering services is hospital industry. A hospital is an institution for health care providing treatment by specialized staff and equipment, and often but not always providing for longer-term patient stays.

The health care delivery system compares favourably with many other Asian countries. This industry is growing at an annual rate of 14%. The size of the Indian healthcare industry was estimated to Rs. 1,717 billion and is projected to grow by 2012 to Rs. 3,163 billion at 13% Compound Annual Growth Rate ,CAGR. Private sector dominates healthcare market accounting for nearly 80% of the healthcare market, while public expenditure accounts for 20%[1]. Many new hospitals are being established in response to the growing disappointment in the role of healthcare for public in general. The new hospitals which are coming up as government, chartable, contemporary and private hospitals are making healthcare as new emerging, largest service sector in India. Healthcare spending in terms of National GDP accounted about 5.2 percent at par to about US$ 34.9 billion in year 2004. As per latest estimate healthcare spending is set to rise by 12 per cent per annum through 2005-09 (in rupee terms) to rise at 5.5 per cent of GDP, or US$ 60.9 billion, by 2009. It is projected that healthcare spending will scale 8 per cent of GDP by 2012 employing around 9 million people.

India has a good healthcare network covering both rural and urban area. Common people have always known the recognized institution for health care providing treatment by specialized staff and equipment as hospital. Considering pan-India perspective, there

are presently about a half million doctors employed in 15,097 hospitals employing 0.75 million nurses to look after more than 870,000 hospital beds. Percentage of medical practitioners holding specialized qualifications in various fields is about 30 per cent[1].

Special medical treatment provided by Indian healthcare sector has achieved tremendous success worldwide. India is now recognized as health destination attracting medical tourism, which is growing by 30 per cent each year. This study examines patient satisfaction in private hospital. The liberation of Indian economic policies has brought a major progressive shift towards global economy and induced entry of foreign brands in healthcare market in South East Asian countries. A private hospital is run by an organization financially managed through payment for medical services by patients themselves, by insurers, or by Foreign Embassies. It is due to advances made in technology in diagnosing technology, where diseases are diagnosed very fast and treated quickly. Modern breakthroughs in medicine for treatment of critical disease are rather costly (SMITH, 2009). Presently the health care system has become expensive in comparison to earlier expenses of treatment. In the current scenario, diagnostic facilities like ultrasound, CT scan, MRI and angiography, have made diagnosis easy but costly. People are not prepared to pay so much for medical care and very often develop the feeling that they are being over charged.

Furthermore, today‘s health care is more expensive than it used to be because it works efficiently. In India, these private hospitals are targeting the 300 million people who count themselves among the nationwide middle class. Despite the price difference, private Indian hospitals provide world-class service: doctors with training comparable to

[1] www.cygnusindia.com/viewlatestreports.asp, accessed 7 February, 2009.

U.S. physicians (many with medical training in the United States), the latest technology and equipment, and infection and mortality rates that compare to those of U.S. hospitals[2]. India is a land of stark contrasts, with a heterogeneous health care delivery system and one point two billion people who exhibit vast health disparities. Similar disparities exist in the quality of health care offered by India's hospitals. While India's public hospitals have struggled, the private health sector has seen an explosion of interest concurrent with the country's economic growth. Two-thirds of Indian households rely on private medical care, a preference that appears to cut across classes, and even rural and paramedic care are dominated by the private sector (SENGUPTA, 2008).

Private healthcare groups are being established in corporate distinguishing feature of patient centricity in hospital design, services, program and excellent caring approach of people. Many private hospitals already established endeavour to provide quality comparable to leading hospitals of the world. They have the reputation for providing finest medical skills and compassionate patient care, benchmarked to international standards[2]. Hospital management is now given full attention to preventable conditions leading to diseases and infection caught through patients. The management has established their own risk analysis processes to cope with risk which may occur in day to day considerable attention has been given to the emerge strategy of relationship marketing. The strategy ensures that customers return to the same hospital for treatment and recommendation; which is made in their social circles. Although the importance of relationship quality as a mediating role between predictors and relationship outcomes is well established in the literature, some central questions concerning the relationship between these constructs have not been fully explored (KIM ET AL. 2007).

[2] www.ficci.com/health-more.htm, accessed 2 July, 2008.

It is because of intense competition for market share that managers are motivated to maintain loyal customers. Despite recent developments in the India healthcare sector, there is still great concern about the quality of healthcare services in the country. Public hospitals are doing their best with limited staff but it still exists a general impression that public hospitals are dirty, professional are clumsy and chaos still exists. Government hospitals are mostly over crowded and under staffed. Huge crowd and long lines is always seen in Out-Patient Department (OPD). For example, Safdarjung hospital of New Delhi gets more than 6000 people in OPD. Nearly 300 patients are admitted daily for observation and treatment. It is believed that doctors in Public hospitals carry a good amount of experience. Their services are sought by everyone. The budgetary constraints in Public hospitals affects greatly in respect of procuring advance equipment and facilities. Innovations, being very costly, do not provide flexibility and restrict creativity. Patients usually prefer to go to private hospitals, hoping to receive high service quality (JABNOUN AND CHAKER, 2003). But in one of the recent study by Arasli, Ekiz, and Katircioglu, (2008), research results revealed that the various expectations of patients have not been met in either the public or the private hospitals.

Several researches have been done in the past few years to find out (study) customers' satisfaction in different service sector. But few studies have been conducted in the health care sector to examine the cause-effect relationships. However, keeping patient satisfied is also dependent on a number of other factors. Very few studies have been devoted for satisfaction of Indian patients in private hospitals. The effect of satisfaction is important to private hospital marketing manager so that the opportunity to take certain actions is well utilized for improving customers' satisfaction. The Indian Hoi-

Polloi Corporation has become health conscious with good socio-economic conditions; incentivating interesting researches in an area which has not been explored to its optimum. Based on the context elaborated above, this paper aims to study service facilities being provided to patients in private hospitals and their effectiveness evaluated by the PSI (Patients Satisfaction Index) model. Patients may look for other providers because they believe that they might receive better service elsewhere. The aim of this research is to develop and to measure facilities available in private hospitals highlighting at the same time patients' choice for expensive private hospitals. This study contributes to the body of academic knowledge by shedding more light into the role of ACSI (American Customer satisfaction index) dimensions, and especially patients, in the PSI for private hospitals.

The study will furnish insights for researchers and managers in their decision-making process. The paper is structured in different sections; the first section is an introduction about hospitals in India; the next section deals with the review of literature in the area and section 3 discusses about the methodology, followed by the analysis section and then by the conclusion.

2. Literature review

Edvardsen et al. (1994) noted that developing quality in service begins with analysis and measurements. According to Parasuram et al (1985), evaluation of service involves a process of service delivery and the outcome of the service. Sitzia, Wood (1998) reviewed and presented issues arising from over 100 research cases published in the field of patient satisfaction. Considerable attention has been given to the pursuit of customer satisfaction by services marketing researches. Westbrook and Oliver (1991) are

of the opinion that organizations are expected to provide services that yield highly satisfied and loyal customers. Some of these benefits constitute an increase in income, a reduction in cost for acquiring new customers and also a spread of good news and, a recommendation of products and services to others (ASIF AND SARGEANT, 2000; HANSEMARK AND ALBINSSON, 2004; REICHHELD AND SASSER, 1990). Consequently, customer satisfaction is considered to be a key to survival of the organization (Jones and Sasser, 1995), as well as the increased market share (Rust et al., 2004) and profitability (HESKETT ET AL., 1994). It is important to explore how customer satisfaction is affected by service facility.

There are several peculiarities associated with service industries that need to be addressed. Services to some extent are intangible. Customers' perception of the service experience is the only accurate way to estimate the quality level of services provided (BABAKUS AND MANGOLD, 1992). According to Rust et al. (1996), customer service is all about perceptions. No service can be tested before it is sold, it cannot be stored, returned or exchanged. For all these reasons, what matters most is customers' perception of their experience and interpretation of it (GRÖNROOS, 2001; ROSS, 1975). According to Leeds (1992), Reichheld (1996), unsatisfied customers may not choose to defect because of the uncertainty of a better service elsewhere. However producing customers' satisfaction is dependent on a wider range of product choices, greater convenience, better prices, and enhanced income (Storbacka et al., 1994).

Porter (1985) suggested that an organization maintaining an edge over rivals in retaining customers is an advantageous position. It is, therefore, important for successful organizations to carefully monitor and manage customer satisfaction (BITNER ET AL.,

1994). Zineldin (2000) considers satisfaction as an emotional reaction to the difference between what customers anticipate and what they receive. Gale and Wood (1994) pointed out that a system that a customer can see is preferable and must be effectively managed.

One key factor in studying customer satisfaction in a healthcare setting is determining just who the customer is. Some researchers identify the customer as the individual who pays for the service. Others identify the recipient of the service as the customer. In this proposed research, a customer is the direct recipient of the healthcare service and/or anyone who acts on the recipient‘s behalf. Various researchers have written about the comparison of patients' satisfaction from public and private hospitals. Rahman, Shahiduzzaman and Rashid (2002) focused that nurses are doing a better job in private hospitals than their counterparts in public hospitals, but are behind nurses in the foreign hospitals. Services rendered by nurses in Bangladesh have been commented as inefficient.

It has been argued in a study that understanding consumer expectations is more complex then other health services. For example, the staff of a medical centre in New Delhi, striving to gain optimum quality level, mentioned that the core indicator of quality service is to know customer perspective, as highlighted in the paper. The findings emphasized that satisfied areas should be sustained and improved (ALALOOLA AND ALBEDAIWI, 2008). Quality is a major concern both in public and private healthcare services. However majority of complaint noted by consumers focused on interaction with hospital staff and other services like comfort, cleanliness, parking, etc. When variables were compared with different hospitals, differences were found at a 0.05 level in seven different hospitals examined (TENGILIMOGLU, KISA AND DZIENIELEWSKI, 1999).

In one of the recent case study, aims to demonstrate the various strategic options available to a pro-profit hospital, focused on the middle-class population and referring to the services that can be offered to target population. Rahman, Qureshi (2008), mentions that LIFENET hospitals in New Delhi are considered as super specialized hospitals. In early 2004, LIFENET considered licensing the brand name and establishing India's first health maintenance organization.

Tools of particular interest are widely used in the USA and in Europe. The European Customer Satisfaction Index (ECSI) and the American Customer Satisfaction Index (ACSI). They have been extensively applied across service industries (FORNELL ET AL., 1996; ANDERSON AND FORNELL, 2000; MARTENSEN ET AL., 2000; DERMANOV AND EKLOF, 2001; FORNELL, 2001; EKLOF AND WESTLUND, 2002; YEUNG ET AL., 2002). In the ACSI model, customer satisfaction, as an intangible economic indicator, is used to monitor the financial viability of companies and industries (FORNELL, 2001). The companies are required to focus their attention on outstanding service quality as the entry-level necessity for long-term customer loyalty and advocacy. They serve as gross assessment of the variability of large economic block in the USA and in Europe. Although Individual customer needs and brand attachment also play crucial roles; without customer satisfaction, these attributes alone will not result in brand loyalists or advocates. It is therefore imperative for companies to focus their efforts on outstanding service quality as the entry-level requirement for long-term customer loyalty and advocacy. Benchmarking between public and private sectors, and for each customer segment, is done between a year's result and the following. A common methodology is used in the ACSI model to produce unique information to each agency on how its

activities that interface with the public affect customers' satisfaction. The effects of satisfaction are estimated, in turn, by specific objectives.

From this background, this study aims to explore the way customer satisfaction relates to patients satisfaction in Indian private hospitals through the ACSI based model; considering this work as a pioneer proposal, since such model has not been used for patients of Indian private hospital sector.

The work of Dr. Claes Fornell, father of the ACSI, does not account much in India. The ACSI service measurement is done on a 1000 points scale and known as Customer Service Index (CSI). To determine the quotient of satisfaction, seven factors are considered: problems experienced; service quality; user-friendly service; service advisor; service initiation; service delivery; and in-service experience[3]. In the ACSI model, a tested multi-equation econometric model, as shown in Figure 1, input the cause and effect model that comes from surveys of customers of each measured company or agency. For private sector industries, company scores for satisfaction levels (ACSI) and other model components are weighted by company revenues to produce industry indices. Industry indices are weighted by revenues to product economic sector indices. The sector indices, in turn, are weighted by the sector's contribution to the Gross Domestic Product (GDP), which produces the national ACSI. For the American Federal Government Agencies, each one is weighted by an extended budget on activities for the selected customer segment to produce a Federal Government Customer Satisfaction Index. ACSI is updated on an ongoing basis with data from one or two sectors collected in each quarter and used to replace the data collected from the prior year. Each company or

[3] http://indianautosblog.com/2008/10/maruti-suzuki-ranks-highest-in-automotive customer-satisfaction-in-india, accessed 24 December, 2008.

agency is measured annually. Every Federal Government Agency in India serves many segments of the public, both being of the government and to external users. For the ACSI measurement, each agency is asked to identify a major customer user segment, central to its mission, from which to measure satisfaction, and the causes and effects of that satisfaction.

The basic strength of any model relies on its applicability and adoptability to various environments. The proposed Patient Satisfaction Index (PSI) model, elaborated by the authors, is inductive of patients' satisfaction created by several factors. It is meant to assure satisfaction of patients in totality and considered innovative as patients' expectations and perceived quality is taken to measure satisfaction. Various models have attempted to define and interpret the idea of determining individual perceptions of the quality of health care delivered. Determinants of satisfaction are examined, in function of the literature, on expectations and demographic and psycho-social variables.

3. Method

This study is based on the ACSI model, to find out the percentage of satisfied patients with the service provided by the following Private Hospitals: Forties Hospital, Maxlife Hospital, Rockland hospital, Apollo Hospital, Escorts Hospitals in and around the city of New Delhi and National Capital Region of India. The work was performed a sample of 180 participants, who are patients of these hospitals, and were selected on the basis of convenient random sampling techniques. The survey instrument development measurement items were mostly adapted from existing relationship quality studies and were modified in the light of a pilot test in a number of ten respondents and interviews with experienced researchers and quality managers from these hospitals, so as to capture

the unique features of the Indian healthcare industry being studied. A total of 27 items (i.e. seven items for the concept of Information, six items for the concept of Process, seven items for the concept of Service, and remaining seven for last one) were generated by the researchers (see Appendix A) . For each item, a five-point Likert scale anchored by five, for "strongly agree" to one for "strongly disagree", with a three level which equals to "neutral" (neither agree nor disagree), as the midpoint. Additional questions about the respondents' demographic profile were also used.

The survey was conducted from January to May, 2009. Respondents were selected on a random basis from healthcare providers (technicians or professional) within these five months. It was considered to obtain diversity in terms of gender, age, and income. Furthermore, the questionnaire addressed factors such as Information, Process, Service and Perceived quality. The questionnaires were distributed in waiting areas, around the offices of the medical service providers (technicians or professionals) in various locations.

The present paper examines customers' satisfaction of hospitals' patient satisfaction and the factors that influence patient attitudes regarding quality practices in general. Based on Dr. Claes Fornell's ACSI variables, the authors tried to identify the effects of each variable to satisfaction.

3.1 Research Model Base

For this study, the ACSI Model was adapted to calculate the customer satisfaction index of the Indian private hospitals. The American Customer Satisfaction Index (ACSI) is the national indicator of customer evaluations of the quality of goods and services available for U.S. residents. It is the only uniform, cross-industry/government, measure of

customer satisfaction. Since 1994, the ACSI has measured satisfaction, its causes, and its effects, in seven economic sectors, 41 industries, in more than 200 private sector companies, in two types of local government services, in the U.S. Postal Service, and in the Internal Revenue Service. The ACSI has measured more than 100 programs of the American Federal Government Agencies since 1999. It allows a benchmark between the public and private sectors and provides unique information to each agency, on how its activities, which interact with the public, have an effect on customers' satisfaction[4]. The measurement of all industries serves to offer ongoing local and international comparisons to satisfaction of local businesses to achieve world-class levels of customer satisfaction, customer loyalty and customer advocacy.

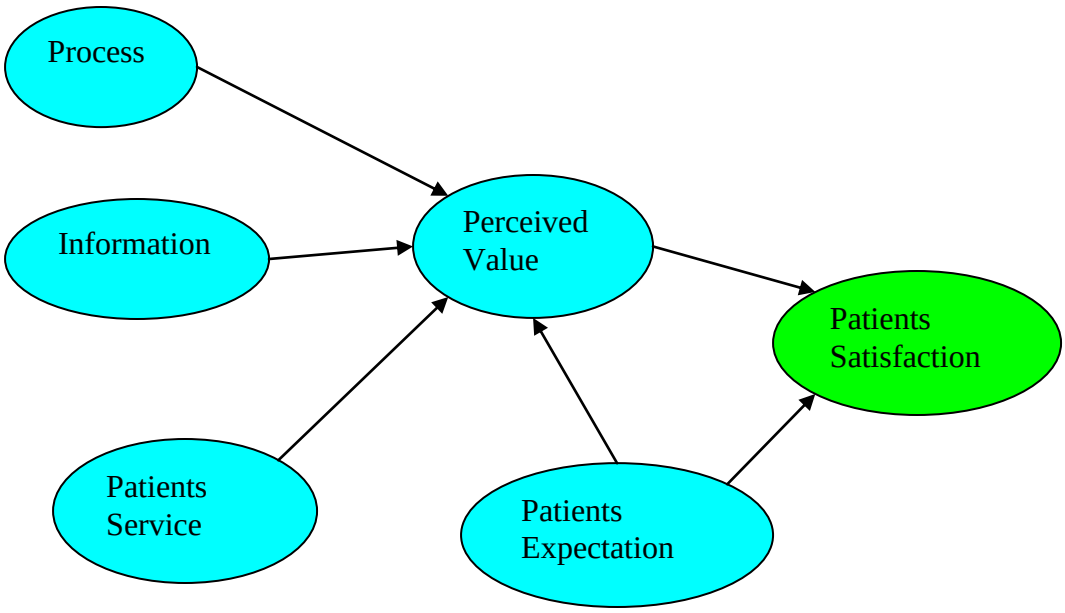
Customer satisfaction is a key driver to customer loyalty. As we are interested in calculating only the satisfaction level of customer (patients), then it does not take into account customer loyalty and complaints. Figure 1 shows the proposed research model and the conceptual framework of the study. Based on the review of literature, the authors have generated four factors associated to the Patients Satisfaction Index (PSI) model. The overall format of the ACSI and ECSI, European Customer satisfaction Index, surveys has been followed with appropriate adaptations to suit the Indian market and the health treatment segment. The study becomes therefore globally comparable and offers a benchmark from which we can compare health services in various parts of the world.

Anderson and Weitz (1989) have measured empirically and suggested that customer's satisfaction of delivered products and services can be an influential element for a customer buying decision to maintain a relationship (Fornell, 1992), and conversely

[4] The ACSI is produced through a partnership between the University of Michigan Business School, the CFI Group and the American Society for Quality.

reduce the likelihood of abandon of the relationship (SINGH, 1988). When a buyer is satisfied with a supplier, he/she expects that a supplier is able to deliver what has been compromised. Yau (1994) established from a consumer survey that there is a positive relationship between satisfaction and intention to re-purchase a product. As the ACSI model has been used in many industries and service sectors, it was considered as the reference model for this research. In the ACSI model, loyalty can be measured but, in this research, it was only measured patients' satisfaction, not loyalty to the healthcare industry. Fornell (1992), which relates a study on Swedish consumers, notes that customer satisfaction, is more important than loyalty in industries such as banks, insurance, mailing systems and automobiles. These empirical results show that the extension of the model to other industries justify the use of such model and the ACSI model to be adequate, at least in the case of the patients from private hospitals.

Figure 1. Conceptual model



Source: Elaborated by the authors

4. Findings and Analysis

The following table shows that the maximum percentage of respondents, at 36%, belongs to the age group of 45-60 years old. The minimum number of respondents, at 4%, is from the age group of 20 to 25 years old. The above table shows that 60% of respondents are Married and 40 % of respondents are Unmarried, comprising of 44.44% belonging to the Undergraduate category. The table further shows that 48% of respondents have annual income 6 Lakhs (600.000 Indian Rs.) to ten Lakhs (one million Indian Rs.) per annum.

Table 1: Demographic profile of respondents:

	Category	No of people	Percentage	Cumulative percentage

Age in years	20-25 years	10	26	26
	25-35 years	14	46	72
	35-45 years	40	15	87
	45 -60 years	50	8	95
	> 60 years	66	5	100
	Total	180	100	
Marital Status	Married	108	60	60
	Unmarried	72	40	100
	Total	180	100	
Sex	Male	87	78.9	78.9
	Female	93	21.1	100
	Total	180	100	
Education	Up to school	27	15	15
	Under graduate	80	44.44	59.44
	Post graduate	68	37.78	97.22
	Up to Ph D	05	2.78	100
	Total	180	100	
Occupation	Business	52	28.9	28.9
	Service	47	26.1	55
	Homemaker	30	16.6	71.6
	Entrepreneur	51	28.4	100
	Total	180	100	

Income group	Below 1 Lakh per year	10	21.11	21.11
	1-3 Lakh per year	48	26.67	47.78
	4-6 Lakh per year	42	23.33	71.11
	7-10 Lakh per year	43	23.89	95
	Above 10 Lakh	42	5	100
	Total	180	100	

Source: Elaborated by the authors

A factor analysis was performed to identify the key dimensions affecting Patient's satisfaction levels and their impact in various private hospitals. The respondent ratings were subject to principal axis factoring analysis with Varimax rotation to reduce potential multicollinearity among the items and to improve reliability on the data (see Appendix B: Rotated Factor Matrix). Varimax rotation (with Kaiser Normalization was converged in twelve iterations). As per the results of the factor analysis and reliability check, the service-quality variables were finalized to be: information, process, service and expectations. From the factor analysis, scales having a loading value of 0.5 and higher were accepted as an important component of the variable. Each factor was analyzed using Kaiser's eigen value of greater than or equal to one (Kaiser, 1960), to see whether each component measured a single factor or not. Finally, the factors forming a component were tested for reliability (alpha = 0.6 or higher). Following this technique, the above-mentioned eight variables of the quality of healthcare services were obtained. Factor analysis was done to determine the various factors leading to customer satisfaction in the health sector (ALI, 2008, 2006, a, b). In our data examination process, we deleted cases

incorporating missing values prior to data analysis. Second, we tested the assumptions underlying the use of ACSI modeling. With respect to sample size (Anderson and Gerbing, 1988), we used a somewhat larger sample sizes given the risk of moderate normality violations. Normality was tested by means of PRELIS2 based on the skewness and kurtosis of the observed variables (BOLLEN, 1989). All the samples revealed significant kurtosis and skewness p-values for most observed variables. Finally, we tested for the existence of univariate and multivariate outliers. Our analysis revealed that exists nearly no outliers.

Table 2: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO)		.667
Bartlett's Test of Sphericity	Approx. Chi-Square	1474.287
	Df	325
	Sig.	.000

Source: Elaborated by the authors

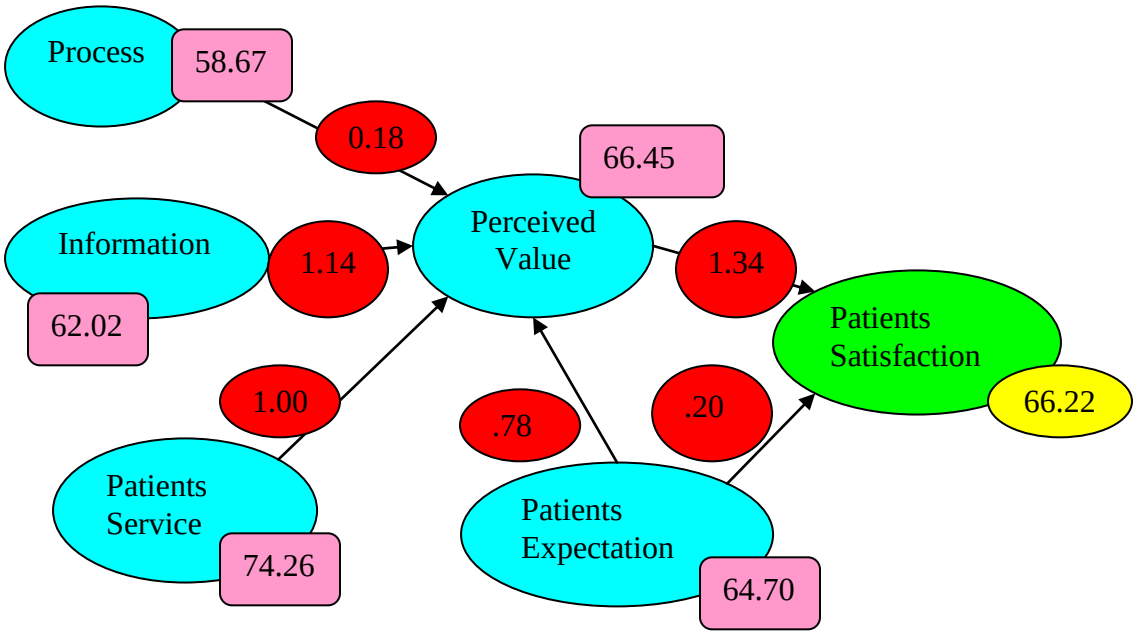
As KMO Value is greater than 0.50, so we can go for further analysis of the data.

4.2 Model Indices

Patients' satisfaction level of services in Indian private hospital's was assessed by PSI model in its modified form. The model estimates the satisfaction/dissatisfaction of patients by identifying the principal activities that interface with patients. Thus, the model, as shown in Figure 2 for patients' satisfaction index, should be viewed as a cause model that moves from left, with satisfaction (PSI), to right. The percentage of variable components is measured by several questions. The large arrows connecting the

components in the circles represent the strength of the effect of the component on the left to the one to which the arrow points on the right. These arrows represent “impacts.” The larger is the number to identify the arrow, the more effective is the component from the left has on the one to the right (Ali and Ahmad , 2009; Ali , Bharadwaj and Dubey 2009) .

Figure 2: Patients Satisfaction Index:



Source: Elaborated by the authors

This PSI (Patients Satisfaction Index) is a weighted average process of four parameters, as introduced in the questionnaire in Appendix A. The questions are answered on a Likert 1-5 scale, but the weighted average is transposed and reported as an index on a 0-100 scale. These four parameter questions measure the overall satisfaction of the Patients from the service of private hospitals in Delhi and NCR. The Patients satisfaction index (PSI) for private hospital Patients is 66.22 on a 0-100 scale.

4.2.1 Drivers of Satisfaction

Three activities interfacing with private hospital patients have been identified as Process, Patients Service, and Information, identified and have been indicated in Figure 2 above. Multiple questions have been used to measure the firstly primary driver of satisfaction of activity. Weighted averages of these questions have been shown as scores

or indices. Apart from these, patients' expectation is also considered as drivers of satisfaction. The score for the drivers is listed in Table 3 (Annex B: E1 – E3)

Table 3: Drivers of satisfaction of private hospital patients

Activities – Drivers of satisfaction	**Year 2009**
Process	58.67
Information	62.02
Patients Service	74.26
Major – Drivers of satisfaction	**Year 2009**
Patients Expectation (Anticipated quality)	64.70
Patients Expectation (Perceived quality)	66.45

Source: Elaborated by the authors

Among the identified Drivers of satisfaction within the PSI model, the weight of the Process has the lowest score with 58.67. The primary Driver of satisfaction, the Perceived Value from patients, stands at 66.45 in the PSI model. Referring to Patients Perception of the overall measured component, Patient service clearly stands-out above the rest, with a score of 74.26. This component scores statistically higher than either with Process or Information (Annexure B: Tables P1, P2, P3 and I1, I2, I3).

The Process data represents the lowest score of the three identified drivers of satisfaction within the PSI model at 58.67 and the Information from the hospital is in between the two drivers with a score 62.02. The Perceived quality, a primary Driver of satisfaction in the PSI model, scores at 66.22. This component measures patients'

perceptions of the overall quality of their experiences with the private hospitals about patients' expectations.

As satisfaction index become increasingly established and recognized as a benchmark tool for decision-makers, consumers, patients and other stakeholders, this study will continue to be published periodically. In addition, when results are compared to the American (ACSI) and European (ECSI) studies, it will continue to offer a benchmark from which patients' satisfaction and anticipated quality can be compared anywhere across the globe. The study will be rolled out across other major industries in India in the near future.

The satisfaction level of patients in private hospitals, at a 66.22 score, should be increased with respect to the needs of patients in private hospitals. Furthermore, the results demonstrate that the private hospitals should improve access to information for patients and would also be well-served in working on the Process aspect. Private hospitals are advised to work for improvement in either or both components of process and information which is likely to enhance patients' satisfaction in future. The respondents with higher education are most likely to change hospital, perhaps because highly educated consumers tend to have greater expectations of services. Gender and income appear not to have a significant association with the respondents' intention to stay with or leave their service providers.

The results obtained for measuring patients satisfaction in hospitals, through of the PSI model, allow an interesting comparison with ACSI model used for measuring satisfaction. The satisfaction level of patients in private hospital is 66.22.

5. Managerial Implications

People generally prefer private hospitals for its cleanliness. Private hospitals are increasingly being recognized for good services and facilities, as they are preferred for availability of best qualified doctors and cleanliness. They have the distinction of being good services and facilities providers. Naturally the treatment in private is costlier than in other hospitals. Employees are well dressed and cooperative and extremely professional in their work. It will add to their reputation positively if testing facilities and lab should be available in hospitals only so that recovery rate will be much more faster as of now. The quality of food served in private hospitals is not up to the mark and often has been commented upon. These hospitals would start giving CGHS (Central Government Health Schemes) to the government employees which provides medical treatments free. Foreign and Indian experts in medical skills are advised to provide medical services as a part of Doctor's Exchange Program for worldwide benefits. Patients from rural area should be given treatment at subsidized rate. Innovating and reinvesting though very costly must be encouraged. Hospitals need to focus on other facilities besides patient care to enhance the level of satisfaction and comfort experienced by patients. Hospitals also need to emphasize on timely provision of services and also invest in staff training and capacity building to make them patient-friendly and technologically sound. As most of patients pay out of pocket, the hospitals should devise novel payment option to enhance patient convenience. Patients' satisfaction levels with regards to infrastructure and level of technology are always high as these hospitals have world class facilities.

There are many issues which need to be given due consideration. The hospitals need to organize training sessions based on the critical importance of service quality and the crucial role of inpatient satisfaction in the health care industry.

The service recovery techniques of promptness, courtesy, effort and professionalism should be used whenever an internal employee has a negative encounter with a patient which must be resolved. The most direct application of service recovery techniques is in the area of conflict resolution. Johnson and Hewa (1997) described what are called retaliatory behaviors connected with service failures. These include nursing a grudge, complaining to others, and trying to turn them against the firm, withholding opportunities for business and other vengeful activities.

A hospital has many of the billing and patient privacy problems that doctors and other healthcare professionals have to deal with. Only two to four percent of our population is insured, media must project health insurance correctly and educate the population about insurance and *mediclaim* as more people get insured; probably more market share will be achieved by these insurance companies. Hospitals should start their own private insurance schemes. Some hospitals in Bombay and Calcutta are doing it. But more importantly, a good private health insurance company should come up. Healthcare insurance facilities though existing in some private and public hospitals should progressively be made mandatory covering at least urban hospitals in the beginning. Some hospitals may deal with a number of people who have chronic conditions; some of these can be alleviated by diet and lifestyle advice, particularly in conditions like diabetes and heart disease. Unless healthcare providers can help patients manage their habits to the extent where the condition can be controlled then they are engaging in good risk management. Those hospitals that treat more than their fair share of chronic cases need to find some way to make their patients take preventative measures.

Payment for medical treatment is done by employer or insurance companies all

over the world, but this system is not very common in India and needs to be examined. Another concern of managers is to regulate diet habit of the patients suffering from chronic conditions like diabetics and heart disease.

One thing noticeable in hospitals in general and public hospital in particular is lack of courteous language. Patients who go to hospitals are in dire need of some soothing language to ease their conditions. Formal greetings can help them along-with polite language by staff (Leeds 1992). An important concept for managerial attention is innovation. It is well known that costs for innovating can be high; the management seeking evidence tends to look for practices that have worked in the past. After an innovation is purchased, an organization has to make sure that the new technology can be put into use; otherwise, the adoption decision would generate little value. The World Health Organization (WHO) had identified that about 50% of the medical equipment in developing countries are unusable (DE COSTA AND DIWAN, 2007). Hospitals have lots of visitors and this makes managing risk to the patients a lot more difficult because staff may not know who is going or coming at any given time.

6. Conclusion

The PSI model, used for measuring patients' satisfaction, needs to be tested in different cultures and environment. A different perspective is likely to emerge from the theory developed in the western culture. In the present situation of internationalization, the theory of PSI can be tested in global contexts. Practitioners should also gain additional insights regarding the acceptance of the model used in a mainstream. Further, the model can be tested in different cultures and nations. The applicability of the model

in different cultures can provide a different perspective to the theory developed in the Western cultures. It is necessary to test the theory in international contexts, especially in the present situation of market global economic meltdown. Many hospitals do not have the facilities of risk management. Hospitals should establish RM, Relationship Management, department with research and development facilities. Future research needs to examine innovation resistance that affects the implementation of an innovation within hospitals.

This study was subject to several limitations that affected the interpretation of the result. The study was restricted by geographical area of Delhi and NCR. Other important areas of India such as the metropopolitan city are likely to yield better understanding of quality of satisfaction of patients. The research of this nature is expensive in terms of money and time.

The first limitation relates from the sample size. Gorsuch (1983) and Hatcher (1994) proposed a minimum subject to item ratio of at least 5:1 concerning exploratory factor analysis, and they noted that higher ratios are generally better. This study only collected 180 useable questionnaires. In addition, those variables examined in this study, especially the most significant predictors affecting relationship quality, may vary. Further studies should examine whether determinants of relationship quality differ according to private hospitals. As discussed earlier, much research has been conducted primarily in the U.S. and in the Western world, but scant attention has been paid to India. Moreover, India has become a center for medical tourism as well as medical outsourcing. There is a need to investigate service quality and its outcomes in India, to enhance service quality standards. The results of such research would help medical service providers to address

the issue of waiting time, to strengthen long-term relationships with patients, since continuing loyalty is a key determinant of service providers. Limitations relate to the use of a non-probability sample and the restricted geographical area of the field research.

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Appendix A:

Table: 2 ACSI:

Process Part

Table: P1 Total Variance Explaine

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.736	24.804	24.804	1.597	22.821	22.821
2	1.260	17.993	42.798	1.269	18.132	40.954
3	1.112	15.881	58.679	1.241	17.725	58.679
4	.936	13.374	72.053			
5	.902	12.888	84.941			
6	.659	9.418	94.358			
7	.395	5.642	100.000			

Extraction Method: Principal Component Analysis

Table: P2 Rotated Component Matrix(a)

	Component		
	1	2	3
Private hospitals have excellent	.176	.263	-.671

service			
Private hospitals have convenient parking space	.029	.696	.106
Private hospitals accepts major credit cards	.684	-.296	-.263
Private hospitals have does not have enough employees to meet customer needs	.698	.361	.410
The check out service is fast and save time	.740	-2.58E-006	.098
Private hospitals have excellent queuing system	.234	.109	.681
Private hospitals have latest medical equipments	.091	-.697	.260

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a Rotation converged in 6 iterations.

Table P3: Component Score Coefficient Matrix

	Component		
	1	2	3

Private hospitals have excellent service	.190	.203	-.581
Private hospitals have convenient parking space	-.021	.548	.083
Private hospitals accepts major credit cards	.488	-.259	-.306
Private hospitals have does not have enough employees to meet customer needs	.386	.257	.250
The check out service is fast and save time	.467	-.029	-.014
Private hospitals have excellent queuing system	.060	.075	.536
Private hospitals have latest medical equipments	.052	-.555	.206

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Information

Table I 1: Total Variance Explained

Componen	Initial Eigenvalues	Rotation Sums of Squared Loadings

t	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.504	41.728	41.728	2.149	35.821	35.821
2	1.218	20.294	62.022	1.572	26.201	62.022
3	.901	15.012	77.034			
4	.573	9.543	86.577			
5	.512	8.531	95.108			
6	.294	4.892	100.000			

Extraction Method: Principal Component Analysis

Table I 2: Rotated Component Matrix(a)

	Component	
	1	2
The display at Private hospitals makes it easy to find what is needed	-.164	.865
Private hospitals gives schemes /offers	.252	.661
I can find Private hospitals advertised in newspaper/TV	.534	.572
I can get good bargain with Private hospitals	.857	.242
Prices are reasonable as compared to other	.674	.018

hospital		
Private hospitals has strong visibility in Media	.765	.032

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a Rotation converged in 3 iterations

Table I 3: Component Score Coefficient Matrix

	Component	
	1	2
The display at Private hospitals makes it easy to find what is needed	-.248	.641
Private hospitals gives schemes /offers	.005	.418
I can find Private hospitals advertised in newspaper/TV	.167	.302
I can get good bargain with Private hospitals	.396	.009
Prices are reasonable as compared to other government / chartiable hospitals	.344	-.114
Private hospitals has strong visibility in Media	.388	-.121

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization

Patients Service:

Table S 1: Total Variance Explained

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.910	41.572	41.572	2.704	38.630	38.630
2	1.236	17.663	59.234	1.372	19.598	58.228
3	1.052	15.028	74.262	1.122	16.034	74.262
4	.610	8.721	82.983			
5	.579	8.273	91.256			
6	.329	4.706	95.962			
7	.283	4.038	100.000			

Extraction Method: Principal Component Analysis.

Table S 2: Rotated Component Matrix(a)

	Component		
	1	2	3
I am satisfied with the Doctors/nurse	.504	.586	.081
The hospital layout makes it easy to find what is needed.	.696	.111	-.088

The Doctors/employee offer personal attention	-.048	.932	-.048
I feel safe in conducting with the private hospital.	.850	.131	-.060
Doctors gives preferential treatment to some emergency patients	.689	.321	-.361
I feel comfortable in this hospital as I feel at home	.875	-.165	.181
Public places are very attractive	-.033	.013	.969

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a Rotation converged in 5 iterations.

Table S 3: Component Score Coefficient Matrix

	Component		
	1	2	3
I am satisfied with the Doctors/nurse	.121	.398	.145
The hospital layout make it easy to find what is needed	.258	-.020	-.037
The Doctors/employee offer personal attention	-.157	.741	.028

I feel safe in conducting with the private hospital.	.319	-.025	-.002
Doctors gives preferential treatment to some emergency patients	.212	.125	-.269
I feel comfortable in this hospital as I feel at home	.384	-.244	.194
Public places are very attractive	.033	.092	.881

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Patient Expectation

Table E 1: Total Variance Explained

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.720	28.660	28.660	1.676	27.925	27.925
2	1.104	18.408	47.068	1.109	18.480	46.405
3	1.058	17.630	64.699	1.098	18.293	64.699
4	.819	13.658	78.356			
5	.716	11.941	90.298			

6	.582	9.702	100.000			

Extraction Method: Principal Component Analysis.

Table E 2: Rotated Component Matrix(a)

	Component		
	1	2	3
I prefer those who provides various variety of services	.730	-.209	.085
Free treatment is important for me	-.603	-.205	.496
I like this hospital due to its hygienic and cleanliness	.761	.097	.142
I prefer to go to the hospital which is open 24*7	-.408	.577	-.339
I prefer to go to the hospital where the facilities are easily available	.123	.814	.228
Hospital should have friendly policy.	.137	.137	.811

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a Rotation converged in 9 iterations.

Table E 3: Component Score Coefficient Matrix

	Component		
	1	2	3
I prefer those who provides various variety of services	.427	-.161	.019
Free treatment is important for me	-.414	-.209	.507
I like this hospital due to its hygienic and cleanliness	.453	.117	.068
I prefer to go to the hospital which is open 24*7	-.197	.506	-.280
I prefer to go to the hospital where the facilities are easily available	.088	.741	.199
Hospital should have friendly policy	.022	.127	.736

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.