

## **Customer Relationship Management influencing Customer Loyalty and Satisfaction – Patients’ Perception in Multispecialty Hospitals of Karnataka**

**Shivakumar K.,**

Lecturer,  
Department of Commerce and Management,  
University College of Arts & Commerce,  
Shankaraghatta, Kuvempu University  
Campus Shivamogga, India.

**Dr. K. S. Sarala,**

Associate Professor,  
Department of Commerce and Management,  
Sahyadri Commerce and Management  
College, (Constituent College of Kuvempu  
University) Shivamogga, India.

### **ABSTRACT**

*The main purpose of this Research study is to find out the patients satisfaction and loyalty in Multispecialty private healthcare services. A structured questionnaire was prepared and collected data from 100 patient participants were selected randomly those visit the selected private multispecialty hospitals at Shivamogga and Bangalore cities in Karnataka. The collected data were analyzed through tables, percentage, weight point, regression and SEM Model. The present study highlights the extent of service quality of the hospital services by the selected sample respondents. This paper is an attempt to find out inter-relationships between Patient perception in customer satisfaction and customer loyalty. This reviews and identifies essential service quality, infrastructure, management and communication related with the customer satisfaction and loyalty in the selected sample. Analysis of the data has been made and suggestions are offered to have better CRM practices to enhance the quality of service in the selected private multispecialty hospitals.*

**Keywords:** Health Care, Quality of Service, Satisfaction level.

### **INTRODUCTION:**

Health is one of the precious components for happiness. An individual's health and the health of a society are complementary to each other. It is a fact that the individual's health contributes to higher productivity and ability, which in turn provides them with higher wages and better prospects. Thus, societal development largely depends on the health of its members.

Health influence the physical, social, psychological and economic abilities of individuals. Health problems which are inevitable are an integral part of the social and economic environment of the community. WHO defines "Health is a state of complete physical, mental and social well being and not merely absence of disease or infirmity". The state of health largely depends on one's genetic endowment, the surrounding environment and the kind of lifestyle that one had lived during childhood and adulthood. It also depends on how the available health care services are utilized by the people.

### **Customer Relationship Management (CRM):**

CRM is a process or methodology used to learn more about customers needs and behavior in order to develop stronger relationship with them. There are many technological components to CRM, but thinking about CRM preliminarily in technological terms is a mistake. The more useful way to think about CRM is as a process that will help bring together lots of pieces of information about customers, sales, marketing effectiveness, responsiveness and market trend. CRM helps business to use technology and human resources to gain insight

into the behavior of customers and the value of those customers.

CRM is the establishment, development, maintenance and optimization of long term mutually valuable relationship between customer and organization. Successful CRM focuses on the profiling or understanding the needs and desires of the customers and is achieved by placing these needs at the heart of the business by integrating them with the organizations strategy, people, technology and business process.

### **CRM in Health Care Sector – An overview:**

In the Health Care sector, CRM systems allow organizations to better anticipate and meet customer needs, which in turn increase sales revenue. When applied to the healthcare industry, healthcare CRM methods can help care providers, hospitals, clinics and physicians nurture patient relationships to develop trust that the best possible care will be given when the need arises.

CRM is a process or methodology used to learn more about customers needs and behavior in order to develop stronger relationship with them. There are many technological components to CRM, but thinking about CRM preliminarily in technological terms is a mistake. The more useful way to think about CRM is as a process that will help bring together lots of pieces of information about customers, sales, marketing effectiveness, responsiveness and market trend. CRM helps business to use technology and human resources to gain insight into the behavior of customers and the value of those customers.

One of the characteristics of India is the high growth of population (1.21 billion as per 2011 Indian censuses) and increasing at 1.8 per cent annual rate. By 2030, India's population is expected to surpass China as the world's most populous nation. It is the responsibility of government to provide an efficient and effective health care services. But, in India it is highly impossible to provide health care services at free of cost to all. The heavy costs involved in obtaining sophisticated infrastructure and the needs to maintain quality of services compelled the government to invite private sector participation.

It is the duty of the hospitals to make the patient and relatives understand that they are providing a good treatment. These facts demand hospitals to have a well-planned Customer Relation Management (CRM) programme concern in his words and deeds in dealing with patients. All the employees, right from the chief doctor to the ward boy should understand that it is their duty to ensure customer satisfaction. The employees should be given proper training in these regards. Besides, the employees should ensure that the patient develops faith in treatment given in the hospital.

### **REVIEW OF LITERATURE:**

The literature in the area Customer Relationship Management (CRM) in healthcare sector is enormous but this review is limited to only those studies which are relevant to the objectives of the present study.

Mr. V. Krishnamoorthy and Dr. Srinivasan(2014) in their article "Measuring patient's perceived service quality for multispeciality hospital" have made an attempt to measure the perception of the purpose of the study is to measure the inpatients perceived service quality for multispeciality hospital in Dindigul and Madurai District of Tamil Nadu. The researcher has adopted a questionnaire method to collect data from the inpatients. The study has identified, Medical Service, Empathy, Admission, Discharge, Physical Ambience, Equality, infrastructure, Tangibility, Medical care and Availability of medicine were the dimensions of service quality of Hospitals. The study also identified that out of ten identified dimensions, only Tangibility, Admission, Equality, Medical service, Medical Care has significant impact on inpatient satisfaction. The identified dimensions may help the multispeciality hospitals to frame suitable policies regarding various dimensions of inpatients perceived service quality.

Hsin-Hui (Sunny) Hu, Jay Kandampully and ThanikaJuwaheer (2009) in their article "Relationships and impacts of service quality, perceived value, customer satisfaction, and image: an empirical study" indicates that delivering high quality service and creating superior customer value can result in achieve high customer satisfaction, thus effecting the firm's corporate image, and ultimately leading to consumer retention. Management should focus on gaining customer loyalty by enhancing customer perceptions of service quality and increasing as perceived by the consumer value, Although previous studies have addressed the importance of service quality, satisfaction, perceived value and image, the precise nature of the relationships that exist between these constructs and the understanding of their effect on customer behaviour still remains a key issue. These findings study seeks to understand the relationships that exist between service quality and perceived value and how they impact customer satisfaction, corporate image, and behavioural intentions.

Dr. Ranajit Chakraborty and Anirban Majumdar (2011) in their article "Measuring consumer satisfaction in health care sector: The applicability of SERVQUAL" mainly focuses on the measurement of patient satisfaction in the light of service quality provided by hospitals. In this regard, a review of literature on the application of

SERVQUAL model has been considered to investigate the relevance of the same in measuring patient satisfaction in health care sector in today's competitive environment.

Gunjan Patel (2008) in his article "Total quality management in healthcare" suggests that Healthcare organizations are required to focus on total quality improvement, rendering acceptable quality health services to patients at affordable price within reasonable price, within in a reasonable time: applying zero errors to all patients services; maintaining a continuous errors prevention program; Training employees in medical care on such aspects as error prevention, reducing delay time and providing prompt reasonable to patients needs. The finding of this study management system have always improvement in such systems to realize the true nature of the quality of healthcare and to be motivated towards improving this quality.

Laith Alrubaiee and Feras Alkaa'ida (2011) in their article "The mediating effect of patient satisfaction in the patients' perceptions of healthcare quality-Patient trust relationship" investigates the relationship between patient perception of health quality, patient satisfaction, and patient trust and the mediating effect of patient satisfaction, study aim also to test the significance of socio-demographic variables in determining healthcare quality, patient satisfaction, and patient trust. Patient perception of healthcare quality was measured using modified SERVQUAL model and results indicate that it appears to be a consistent and reliable scale. Finding that study the patient perception of healthcare quality has a strong and positive impact on the patient satisfaction and patient trust, patient satisfaction has also significant impact on patient trust. Moreover, patient satisfaction appears, to play an important mediating role in increasing the strength of the association between healthcare quality and patient trust in healthcare service provider.

Juan Meng and Kevin M.Elliott (2010) in their article, "Investigating Structural Relationship between Service Quality, Switching Costs, and Customer Satisfaction" extends current research by testing a framework for understanding the underlying relationships between perceived service quality, switching costs, and customer satisfaction with a service provider. The findings of this study suggest that there is a significant and positive relationship between service quality and switching costs. Perceived switching costs, however, do not appear to lead to customer dissatisfaction.

Buntunwan Laohasirichikul, SirionChaipoopirutana and Howard Combs (2011) in their article "Effective Customer relationship management of health care: A study of hospitals in Thailand" investigates the effects and the relative importance of the four perceived service quality dimensions on corporate image, customer satisfaction, and customer loyalty. To obtain results, factor analysis and multiple regression techniques are applied to data collected from 500 Thai outpatients of the five largest private hospitals in Bangkok. The findings indicate that the four dimensions significantly affect corporate image, customer satisfaction, and customer loyalty. More specifically, the doctor concern dimension is the most important factor affecting customer satisfaction and customer loyalty. The tangibles dimension is the most important factor affecting corporate image.

Like this few works are carried out focusing on various dimensions of health care services.

## **OBJECTIVES OF THE STUDY:**

- To ascertain the factors affecting the relationship between the customers (patients) and selected health care units
- To study the satisfaction level of customers towards service offered by selected health care units for the study and
- To offer suggestions to improve the service quality in hospitals and patients satisfaction

## **SCOPE OF THE STUDY:**

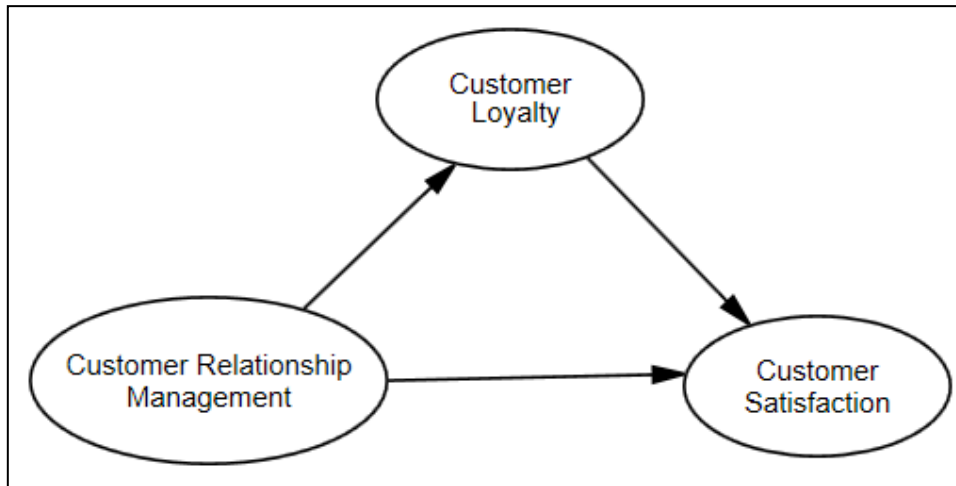
The present study, in fact is an exploratory investigation about the ongoing CRM efforts of the selected health care units in Bangalore and Shimoga cities.

The scope of the study covers the evaluation of CRM practice in health care service provider in the sample selected. The scope extends to cover the fulfillment of the objectives set out and to cover offering of a set of meaningful suggestions for improving CRM practices in the health care units selected.

## **HYPOTHESES OF THE STUDY:**

Basically three hypothesized models are conceptualized to achieve the objectives of the study and the same is depicted in Fig 1. It is a well established that Customer Relationship Management dimension is reflected by four sub components namely Quality Services, Infrastructure, Management of the Hospital and Communication.

**Fig 1: Conceptual Frame work of the relationship between Customer Relationship Management and Customer Loyalty and Customer Satisfaction in hospital management – Patients' Perspective**



The primary objective of the study was to examine the relationship between the following components.

**H1:** Customer Relationship Management (CRM) has a significant (statistically) influence/impact on Customer Loyalty.

**H2:** Customer Relationship Management (CRM) has a significant (statistically) influence/impact on Customer Satisfaction.

**H3:** Customer Loyalty has a significant (statistically) and positive influence or impact on Customer Satisfaction.

#### **Sources of Data Collection:**

The study uses both Primary and Secondary sources of data. Primary data have been collected through Questionnaire distributed to the patients at selected multi-specialty hospitals in Shimoga and Bangalore cities seeking their opinion and suggestions. The secondary sources cover the relevant literature from available journals, on-line sources, books etc.

#### **Sampling Design:**

A sample of 100 respondents is considered for the purpose of the present study. Simple Random Sampling Method is adopted for the selection of the respondents.

Selected Sample units of Hospitals and Number of respondent

S. N.	City	Selected Hospitals	Respondents
1	Bangalore	Fortis Hospital, Bannerghatta Road	24
		Manipal Hospital, Old Airport Road	20
		M S Ramaiah Memorial Hospital Mathikere	21
2	Shimoga	Sahyadri Narayana Multispeciality hospital	20
		Nanjappa Life Care	15
Total			100

#### **LIMITATIONS OF THE STUDY:**

- The study is confined to the selected multi-specialty hospitals in Bangalore and Shimoga cities
- The size of the sample is limited to only 100 respondents
- Non-response by few respondents is another limitation

#### **QUESTIONNAIRE DESIGN:**

Primary data is collected through well framed questionnaire comprising optional type and likert 5 point scale type questions. The questionnaire is divided in to six major attributes namely service quality, infrastructure, Management, loyalty, communication, customer satisfaction opinion of the respondents. The first part consists of optional type questions to ascertain the details of demographic background of respondents of selected private

hospitals in Karnataka. This section is useful to ascertain place, gender, age, education, occupation, income, etc. All the CRM attributes are sought on a 5 point scale viz., strongly agree, agree, neutral, disagree, strongly disagree. The scores awarded to the response of each component under attitude head were viz 5 , 4, 3, 2, 1.

### STATISTICAL TOOLS:

The data collected are properly classified, analyzed and interpreted with the help of advanced statistical package for social science research. Tools like mean, percentages, SEM model, Regression are also used to arrive at results of the sample collected at various stages. Charts and tables are used for the interpretation of result.

### SOCIO-ECONOMIC PROFILE OF PATIENTS:

**Table 1: Socio-Economic Profile of Respondents**

Particulars	Description	No. of Respondents	Percent age (%)
Sex	Male	55	55
	Female	45	45
	<b>Total</b>	<b>100</b>	<b>100</b>
Age	Below 20	12	12
	20-40	24	24
	40-60	33	33
	Above 60	31	31
	<b>Total</b>	<b>100</b>	<b>100</b>
Marital Status	Married	71	71
	Un Married	29	29
	<b>Total</b>	<b>100</b>	<b>100</b>
Educational Qualification	No formal Education	Nil	Nil
	SSLC	10	10
	PUC	15	15
	Graduation	33	33
	Post Graduation	26	26
	Professional Course	16	16
	<b>Total</b>	<b>100</b>	<b>100</b>
Occupation	Student	09	09
	Home Maker	18	18
	Self-employed	33	33
	Employed	24	24
	Retired	10	10
	Agriculture	06	06
	<b>Total</b>	<b>100</b>	<b>100</b>
Income (PM)	Below 25,000	12	12
	25,000-50,000	12	12
	50,000-75,000	31	31
	75,000-1,00,000	21	21
	Above 1,00,000	24	24
	<b>Total</b>	<b>100</b>	<b>100</b>

**Source:** Survey results

### RESULTS AND DISCUSSION:

The socio-economic profile of patients of selected Multispecialty hospitals was analyzed and the results are presented in Table-1. The results show that about 55 per cent of patients are males and the rest of 45 per cent are females. It is observed that about 12 per cent of patients belong to the age group of below 20 years followed by 20 – 40 years (24 per cent), 40 – 60 years (33 per cent), above 60 years (31 per cent). The results indicate that about 10 per cent of patients have the educational qualification of secondary education followed by P.U.C (15 per cent), Graduation (33 per cent), Post Graduation (26 per cent) and Professional education (16 per cent). It is

clear that 9 per cent of patients are students followed by Home Maker (18 per cent), Self employed (33 per cent), Employed (24 per cent), retired (10 per cent) and agriculture (6 per cent). It is apparent that about 12 per cent of patients belong to the monthly income of below Rs 25,000 followed by Rs.25,000 – Rs.50,000 (12 per cent), Rs50,000- Rs75,000 (31 per cent), Rs.75,000 – Rs.1,00,000 (21 per cent) and above Rs1,00,000 (24 per cent). The SEM model of the conceptual framework with respect to Patients' Perspective of Customer Relationship Management and satisfaction was designed as given below.

**Fig 2: SEM model for Customer Relationship Management influencing Customer Loyalty and Satisfaction – Patients' Perception**



As a next task of statistical analysis, the consistency (Reliability) and some validity checking of the pilot data (100 respondents) answered by both type of the respondents namely patients was carried out using Confirmatory Factor Analysis and the results are depicted below.

**Table 2: Reliability and Item Loadings Constructs of Measurement Model for constructs under CRM and customer satisfaction– Patients' Perceptive – PILOT DATA**

Latent Variable	Items	Standardized Loadings	Composite Reliability*	Cronbach Alpha	Average Variance Extracted (AVE)
Quality Services (QS)	QS_1	0.669	0.771	0.777	0.279
	QS_2	0.547			
	QS_3	0.426			
	QS_4	0.591			
	QS_5	0.359			
	QS_6	0.643			
	QS_7	0.528			
	QS_8	0.496			

Latent Variable	Items	Standardized Loadings	Composite Reliability*	Cronbach Alpha	Average Variance Extracted (AVE)
	QS_9	0.411			
Infrastructure (INFRA)	INFRA_1	0.366	0.719	0.729	0.278
	INFRA_2	0.706			
	INFRA_3	0.638			
	INFRA_4	0.512			
	INFRA_5	0.533			
	INFRA_6	0.429			
	INFRA_7	0.417			
Management (MANAG)	MANAG_1	0.614	0.727	0.759	0.282
	MANAG_2	0.584			
	MANAG_3	0.329			
	MANAG_4	0.593			
	MANAG_5	0.511			
	MANAG_6	0.447			
	MANAG_7	0.578			
Communication (COMM)	COMM_1	0.617	0.728	0.729	0.402
	COMM_2	0.664			
	COMM_3	0.682			
	COMM_4	0.567			
Customer Loyalty	LOYAL_1	0.550	0.714	0.718	0.337
	LOYAL_2	0.576			
	LOYAL_3	0.501			
	LOYAL_4	0.714			
	LOYAL_5	0.538			
Customer Satisfaction	SATIS_1	0.674	0.710	0.710	0.380
	SATIS_2	0.595			
	SATIS_3	0.576			
	SATIS_4	0.617			

#### Convergent Validity:

Convergent validity is shown when each measurement item correlates strongly with its assumed theoretical construct. In other words the items that are the indicators of a construct should converge or share a high proportion of variance in common. The value ranges between zero and one (0 – 1). The ideal level of standardized loadings for reflective indicators is 0.70 but 0.60 is considered to be an acceptable level (Barclay et al., 1995). Accordingly, from Table 1, it is observed that most of the items under each construct have loadings greater than 0.60. Hence, it can be concluded the occurrence of convergent validity but less short to complete convergence. Speaking about the Reliability factor, it is observed from Table 1 that QUALITY SERVICES has a composite reliability value of 0.771; INFRASTRUCTURE with a composite reliability of 0.719, MANAGEMENT with 0.727, COMMUNICATION with 0.728, Loyalty with a composite reliability of 0.714 and Satisfaction with 0.710.

The findings reveal that most of the constructs are higher than the required reliability. Hence we conclude that all the items grouped completely converge to its respective dimensions. Furthermore, the cronbach alpha values across each of the dimension depicted in the above table have more than 0.60 which is again higher than the required threshold value. Hence, we can again conclude that there is a consistency in the data and also the questionnaire has been administered to the relevant respondents with relevant questions.

#### REGRESSION RESULT:

**Table 3: Standardized Regression Weights for CRM and customer loyalty and satisfaction**

			Standard estimate	S.E	C.R	P value
Customer Loyalty	<---	CRM	0.806	0.158	5.892	0.000*
Customer Satisfaction	<---	CRM	0.662	0.216	4.172	0.000*
Customer Satisfaction	<---	Customer Loyalty	0.259	0.190	2.609	0.018*

\*Significant at 5%.

The regression results are provided in Table 3. Accordingly, it is observed that the p-value of the relationship between CRM and CUSTOMER LOYALTY ( $\beta=0.806$ , C.R = 5.892,  $p<0.05$ ) is less than the significance alpha level of 0.05, we accept H1 and conclude that CRM has a significant influence/impact on CUSTOMER

LOYALTY. Similarly, it is observed that the p-value of the relationship between CRM and CUSTOMER SATISFACTION ( $\beta=0.662$ , C.R = 4.172,  $p<0.05$ ) is less than the significance alpha level of 0.05, we accept H2 and conclude that CRM has a significant influence/impact on CUSTOMER SATISFACTION. Finally, it is observed that the p-value of the relationship between CUSTOMER LOYALTY and CUSTOMER SATISFACTION ( $\beta=0.259$ , C.R = 2.609,  $p<0.05$ ) is less than the significance alpha level of 0.05, we accept H3 and conclude that there is a statistical evidence to conclude that CUSTOMER LOYALTY has a significant (statistically) and positive influence or impact on CUSTOMER SATISFACTION.

Table 4 provides the summary of test results of the study hypotheses

**Table 4: Summary of test results of the study Hypotheses**

Hypotheses	Study Hypotheses	Result
H1	CRM has a significant (statistically) influence/impact on CUSTOMER LOYALTY	Fully Supported
H2	CRM has a significant (statistically) influence/impact on CUSTOMER SATISFACTION	Fully Supported
H3	CUSTOMER LOYALTY has a significant (statistically) and positive influence or impact on CUSTOMER SATISFACTION	Fully Supported

### SUGGESTIONS:

- Hospital managements should consider reasonable rates because now-a-days even below middle income group of people prefer private hospitals for treatment.
- Proper staff training would take care of the preliminary screening and as a result he/she understands procedures and follows them correctly.
- The hospital should take every effort to keep the surroundings clean. Proper systems for disposal of waste should be evolved
- Staff orientation and training adds to the security of the employee by enhancing his effectiveness and his ability to meet should be standardized
- Efficient services in hospitals today do not mean providing only advanced medical technology, also upgrading of support services
- Healthcare providers to make complaints when they face any problems in the hospital campus. For that, complaints or suggestions box must be provided and action must be taken by the hospital authorities against such complaints to improve the service.
- The management of the hospital should give importance towards sympathetic attitude towards patients showing respect for dignity of the patient
- The record should also be classified according to the frequency of visits and different colored stickers may be pasted on this record for easy identification. They should be stored, separately for in and out-patients

### CONCLUSION:

Customer Relationship Management (CRM) is significant for hospital services as it has been for any other businesses. A hospital helps in restoring and maintaining the health of the people. This study brought out an important observation that there can be a high level of agreement in perception of quality between patients and health care providers if it is analyzed in proper and transparent manner. The level of agreement possibly reflects the department's dedication towards superior education and training in patient care and constant efforts for improvement. Patients are generally treated over a longer duration once they develop a rapport with the staff. This may influence their perception and reporting over time. The same may not hold true in other departments where patients come for shorter durations and may be have a different perception. In future, a follow-up study across different types of hospitals with more number of participants may be carried out to evaluate the impact of various parameters in perception of quality and the satisfaction levels. Such studies should aim to assess patients perception at different time points like points like before, during or after treatment. This may provide an entirely different dimension of patient's perception. A CRM system is an innovative technology which makes the process of acquiring, developing and maintaining relationships with customers more effective and efficient. The benefits of CRM could be improved customer service, reduction in cost and better retention of clients.

---

**REFERENCES:**

- Barclay et al., (1995). The Investment Opportunity Set and Corporate Financing, Dividend, and Compensation Policies, *Journal of Financial Economics*, Vol. 32 (1992), pp. 263–292.
- Bharath H Aithal and Ramachandra T V, *Measuring urban sprawl in Tier II cities of Karnataka, India, Proc. of IEEE Global Humanitarian Technology Conference (GHTC) 2013*, Trivandrum, Kerala, India, August 23-24, 2013
- Buntunwan Laohasirichikul, Sirion Chaipoopirutana and Howard Combs Effective Customer relationship management of health care: a study of hospitals in Thailand, *Journal of Management and Marketing Research*, Volume 02, Issue-04, 2011. PP No 1-13
- Chin, W.W. (1998). The Partial Least Squares Approach to Structural Equation Modeling. *Modern Methods for Business Research*, 2, 295-336.
- Fornell, C., and Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, (18:1), pp. 39-50.
- Gunjan Patel Total quality management in healthcare, 2<sup>nd</sup> edition Jaico Publishing, India-2007 , PP No 340-350
- Hsin-Hui (Sunny) Hu, Jay Kandampully and ThanikaJuwaheer, Relationships and impacts of service quality, perceived value, customer satisfaction, and image: an empirical study, *The service Industries journal*, Volume 29, Numver 02, 2009. PP No 111-125.
- Juan Meng and Kevin M.Elliott Investigating Structural Relationship Between Service Quality, Switching Costs, and Customer Satisfaction, *Journal of Applied business and Economics*, Volume 05, Issue-02, 2011. PP No 1-15
- LaithAlrubaiee and FerasAlkaa'ida The mediating effect of patient satisfaction in the patients' perceptions of healthcare quality-Patient trust relationship, *International Journal of Marketing studies*, Volume 03, Number-01, February-2011. PP No 103-128
- Dr. RanajitChakraborty and AnirbanMajumdar Measuring consumer satisfaction in health care sector: The applicability of SERVQUAL, *Journal of Arts, Science and Commerce*, Volume 02, Issue-04, October-2011. PP No 149-161.
- Mr. V. Krishnamoorthy and Dr.R.Srinivasan, Measuring patient's perceived service quality for multispeciality hospital,. *Research Journal of commerce and behavioural science*, Volume 03, Number-05, March-2014, PP No 59-69.

----