DRIVERS OF CUSTOMER RELATIONSHIP MANAGEMENT AND ITS EFFECT ON SATISFACTION: AN INTERNATIONAL PATIENT'S PERSPECTIVE OF INDIAN HOSPITAL

Huma Sethi
IIHMR University, Jaipur, India
Email: humasethi@gmail.com

Seema Mehta
Ph.D., Associate Professor, IIHMR University, Jaipur

ABSTRACT

The study aims to investigate the drivers of CRM as perceived by international patients in a hospital setting and predict the relationship between the drivers of CRM and Customer satisfaction by using a cross sectional analytical study design wherein primary data is collected from international patients/ attendants treated at hospitals in Delhi/ NCR, by using a structured questionnaire wherein the responses are mapped on a likert scale of 1 - 5. The drivers of CRM identified through the literature review were further explored through Exploratory Factor Analysis to find out the drivers of CRM as perceived by international patients and were further subjected to multiple linear regression to find out the effect of the drivers of CRM on satisfaction of international patients. The findings revealed that the drivers of CRM led to 42% variance on satisfaction of customers and out of all the drivers, customer satisfaction was affected the most by Trust, such that with a unit increase in trust, satisfaction of customers increased by .274. There was no impact of demographic variables like age, gender and mode of payment on the satisfaction of international customers. This study shall enable the policy makers at respective hospitals to take appropriate decision to position Indian healthcare setup as one of the valuable medical tourism destination since it has immense medical expertise and cost advantage too. Since medical tourism is a new phenomenon and very limited studies have been done to explore the drivers of CRM leading to satisfaction in case of international patients in an Indian hospital, this study is one of its kind which seeks to explore the patient's perspective of satisfaction through driver of CRM and gives us new drivers best suited in Indian context.

Keywords: Medical Tourism, CRM, Customer Relationship Management, Customer Satisfaction, EFA – Exploratory Factor Analysis

INTRODUCTION

In the current era of competition, it is becoming extremely significant for all the corporate organizations to implement CRM framework to ensure effective business processes and profitability, thus CRM can be explained as an important tool which works as an interface for managing the current and potential customers of any organization through effective planning and coordination in order to reach out to various departments and channels to enable a smooth experience for the customers (Rai, 2012). As suggested by Nguyen & Mutum (2012), any organization which have implemented CRM practices have experienced a faster process in handling queries and concerns of the end users and also helps in mediating the effect on the future leads thus ultimately increasing the sales a s result of better managed systems in place. Long, Khalafinezhad, Ismail & Rasid (2013) advised that for many organizations, governance of the employed CRM practices have been very critical specifically when establishing customer satisfaction and loyalty. The main components of CRM as considered by many organizations are employee activities, customer service, relationship and communication. It has also been observed that the employee conduct has a considerable effect on satisfaction and loyalty of costumers.

Law, Ennew , Mitussis (2013) suggested that there have been many studies to get an insight of the components of CRM systems in the service sectors and it has been observed that the adoption of CRM practices have been the result of the business performance and the customer and employee satisfaction. It was further discussed by Anshari , Almunawar (2012) that lately a lot of healthcare businesses are interested in CRM through technology to manage their patients and various interfaces. Various advancements in technology is enabling the healthcare institutions to enhance support, and wellbeing to the patients thus enabling them to retain their customer base. In developing countries, higher growth rate in the healthcare has been seen and factors contributing primarily have been service quality, responsiveness which further has direct relationship with the satisfaction and loyalty of a patient in a hospital Meesala & Paul (2018).

As suggested by Al Amin, Makarem, Pradhan (2011), there has been an increase in the number of international patients travelling to the developing economies in recent times. International clientele is considered to be profitable and the hospitals need to agree to the concept of attracting well off clients requiring complex medical procedures. Hence India as a destination is developing its capabilities to attract international patients. In the Asian region, in the recent past there has been an emergence of many travel destinations and India is quite popular amongst them. Medical tourists from many countries like UK, US, Mauritius, Bangladesh, Fiji, Afghanistan, Nepal etc have been visiting for various medical procedures. Patients from various countries have been visiting India for procedures like knee transplant, heart surgery, dental surgery, hip replacement and cosmetic surgery which is

available at best possible cost and best of medical expertise, thus India is emerging as a popular medical tourism destination (Anvekar, 2012). Further as per Mochi, Shetty & Vahoniya (2013), for India to enjoy a designation of a preferred destination, it becomes very important to identify the aspects that influence the magnetism of India in the world of health tourism. In Indian environment, it is believed that service quality and charges are the important aspects to choose any destination; however enough value is also given to the competitive edge that the destination holds, along with the outlook of the tourist which is comparatively less significant.

Through this study the most important factors of CRM which affect the satisfaction of International patients getting treated at the hospitals in India were identified to provide an overview to the hospitals about the aspects to develop lasting customer associations across the business functions in the hospital setting. The perception of the international patients of the selected hospitals will assist the stakeholders to align their practices with the customer relationship management (CRM) framework suggested. As it has been observed that patients from overseas are on an increase, thus the outcomes of the perception of the international patients through this study will lead to strategic actions to increase in the performance of these corporate health care services by attaining better quality of service and satisfaction of consumers. The study highlights how India can harness the opportunity by utilizing the available resources, portraying the existing advances in health facilities, employment of skilled medical professionals who are fluent and offering economical treatment charges when compared with the western countries. Additionally, the present study will further fill the gap in research identified in terms of the limited literature available related to the health care sector in the Indian context and will provide a relevant basis to future research.

LITERATURE REVIEW

CRM involves a significant process of selection of the customers that belong to a particular firm and contribute towards the profitability and future relationship with the organization; it also focuses on optimizing the future and current value of customers of an organization (Kumar, (2010). Valmohammadi & Beladpas (2014) observed that CRM is one of the management approaches which helps the companies in attracting, retaining and in identification of the profitable customers as a result of association between them.

Akroush et al., (2011) believed that Information technology sectors have contributed immensely towards the adaption of CRM by the organizations to have an orientation of their customers. Peter Keen, (2009) also advised that use of information technology has contributed vastly towards the shifting of transaction based to a relationship based economy and thus affecting the business strategies of the organizations to achieve profitability. Ueltschy, Laroche, Zhang, Cho, and

Yingwei, (2010) in their research stressed that the customers in today's time can easily access data and details on the internet and thus are associated through the means of technology. They also have a convenience of comparing prices thus the impact on non price dimensions like quality of service hold an important value in attracting customers.

As per Lusch, Vargo & Wessels (2008) no longer are these days the product's values created in factories but at the interaction point of the customers, and CRM play an important role towards the growth of all such organizations which developed the understanding towards customer service and satisfaction as a result of CRM implementation.

Relationship marketing in service sector and merchandise has been pointed out by Chahal & Kumari (2011) as an important contributing factor for CRM. Santouridis &Veraki (2017) also advised for relationship marketing primarily through communication to be utilized primarily to influence and comprehend customers in order to enhance profitability of the organizations.

Long et al. (2013) proposed that factors like behavior of the employees, service quality, interaction and relationship contributed towards customer's loyalty and satisfaction.

Ito (2020) stressed that the CRM is a combination of sales, marketing, processes, support and services along with technology and people of any organization to enhance the relationship with the customers leading to further satisfaction and retention of the customers. Thus CRM is a synthesis of much functionality wherein the customer is of prime importance.

In a study conducted in the telecom sector by Hanif, Hafeez, and Riaz (2010) customer service and fairness of price were found to have an impact on customer satisfaction, however a greater effect was observed for price factor leasing to satisfaction as compared to customer service.

Sabir, Ghafoor, Akhtar, Hafeez, and Rehman (2014) studied the effect of service quality on satisfaction in the banking sector and found that there existed a notable relationship between the attributes of service quality and customer satisfaction. The study recommended that by providing superior quality services to the consumers, the banks can have an upper edge over their competitors.

In the hotel industry, the determinants of customer satisfaction were studied by Li, Ye, & Law (2013) through the use of the online reviews. The outcomes revealed F & B services, convenience of transportation, value of money and convenience to the tourist destinations were the most significant factors towards satisfaction of customers.

In another study conducted by Lam & Li (2017), effects of E – CRM on trust and satisfaction were explored as customer's perceptions in the e-commerce industry, and it was found that e-service quality and live chat in E-CRM impacted the satisfaction of the customers.

In today's competitive surroundings, almost all the industries are striving hard in order to deal with the problems related to the competition in the businesses and the changes in technology. Thus the health industry cannot be left behind. Health care in the previous few years is working on effectively and efficiently handling the issues by incorporating the technology and IT in order to improve the healthcare industry.

Further, the aspect of satisfaction of the customers plays an important role in improving the industry wherein patients are the customers who are directly affected by the policies. In order to address this issue one of the solutions proposed was the adoption of the software of Customer Relationship Management. CRM can be considered as a philosophy of Management that assists in the formulation of an orientation of the firm towards the potential and the existing customers.

Poku, Behkami, & Bates (2017) emphasized on establishing the patient relationship management or PRM system in healthcare organizations which is a replica of CRM. It helps in collecting the information about patients which can be used further to improve businesses. In order to create trust between the patient and the hospitals, many healthcare institutions are now introducing an appropriate framework for Customer Relationship Management.

Khoshraftar et,al.(2011) suggested that with an increase in competition between private hospitals to have a greater market chunk, customer satisfaction can assist them in increasing their profitability, as a result of CRM. Gandhi & Tandon (2017) in their study done on the hospitals in Delhi, emphasized on the use of CRM through technology in healthcare industry, and revealed that variables like the implications of CRM's technology has altered the hospital's image, leading to the enhanced satisfaction of the customers towards the services provided by the hospital

As per Meesala and Paul (2018) Healthcare industry has seen immense growth in last few years and thus the study revealed that responsiveness and reliability had an influence on the satisfaction of patients.

In another study done in the healthcare sector of Ghana by Anabila, Kumi & Anome (2019) the impact of quality of service, loyalty of customers and the customer satisfaction were researched by comparing the service quality of public and private hospitals and the results emphasized on a positive relationship between the satisfaction of the customers and the quality of services.

Mensah (2015) examines the impact of CRM in hospitals and gathered the responses of patients and attendants along with the management staff of the hospital through random sampling method and discovered that technology, service quality, and the behavior of the employees positively influenced satisfaction of the customers.

As per Heung, Kucukusta, & Song (2011) through the globalization of healthcare a new form of tourism has emerged and is known as healthcare tourism, and medical tourism amongst this arena is the fastest growing area. Further Fetscherin & Stephano (2016) stressed that factors like high-quality healthcare, increased incomes, low-costs of treatment, easy transport and reduced cost for the same along with technology and knowledge transfer contribute to travelling at distant places by travelers for medical reasons. Tourism being one of the most significant markets generates approximate USD 100 billion annually world over from medical tourism as a result of increasing medical facilities.

Warren (2020) defined medical tourism as patients travelling across borders for medical treatments and the main reason for medical tourism are reduced waiting time, cost effectiveness and non availability of treatment in patient's home country. Shriedeh (2019) explored the one-on-one impact of international patient's relationship with innovative capabilities of the health care sector for patients from Jordan. It was found that joint problem solving and long-term relationship influenced innovation positively.

Wang (2012) conducted a study on the medical tourists from china to understand the effect of perceived value as in factors of sacrifice and benefits influencing the purchasing intention by medical tourist and it was found that perceived value was a major predictor of the intentions of the customers and amongst benefits, the quality of service, the perceived medical quality and enjoyment were the key factors.

It was observed that although CRM has gained importance in last few years, however there have been instances wherein the organizations were reluctant to adopt CRM technologies in spite of huge probability of emerging as marketing leaders, owing to high risks such that CRM investments can provide high returns but can also lead to high failures. (Gartner, 2003). As per Finnegan and Currie (2010), mainly the organizations viewed CRM as a technological investment, thus they failed to reap benefits by employing CRM. It was also suggested by Palmatier et al. (2006) that there are very limited studies wherein the still customer's perception about the organization's CRM strategies have been studied. Scholars like Wisniewski & Wisniewski (2005) and Coddington et al (2001) emphasized on the importance of CRM in health sector to meet the expectations of the patients but there is huge asymmetry that has been observed between hospitals and patients.

As suggested by Peppers et al. (1999); Winer (2001) CRM is an important tool in service industry but there are very few studies that have been carried out to measure all the aspects of CRM

Thus the current study aims to identify the drivers of CRM and find out the association between the drivers of Customer Relationship Management their effect on customer satisfaction from the perspective of international customers of the hospitals in India. Since there has been a very limited research study which has been done in the past to address the issues of CRM and customer satisfaction with respect to the hospitals in Indian context that focuses on the perceptions of international customers, the current study aims to plug this research gap. Various factors have been identified in the current study that affect customer satisfaction like physical environment, technology, relationship, Interaction, service quality, price factor, perceived value and trust which will be further explored and their effect on customer satisfaction will be analyzed using linear regression model.

AIMS AND OBJECTIVES

The aim of the study is -
• To identify the drivers of CRM from the customer's perspective.
• To determine whether CRM plays a role in building Customer satisfaction.

The specific objectives of this study are:
• To investigate the drivers of CRM as perceived by international customers in a Hospital setting.
• To investigate the cause and effect relationship between the drivers of Customer Relationship Management and Customer Satisfaction

METHODOLOGY

 The study was carried out in multispecialty private sector hospitals of Delhi/ NCR region using primary data collection method via cross sectional survey of international patients or their attendants through a structured questionnaire wherein the responses were plotted using likert scale. It was believed that private hospitals attract higher number of international patients and hence the response rate would be the maximum from these hospitals. Moreover, as per the report on Healthcare, Telemedicine & Medical tourism in India, (February 2015- ASA& Associates LLP), multispecialty hospitals had higher occupancy of international patients.

Population and Sampling

The study utilized multistage sampling to constitute the sample frame comprising of the hospitals from four zones (i.e East, West, North and south Delhi, Faridabad,

Noida and Gurgaon) of Delhi & NCR region as per the inclusion criteria. Two hospitals from each zone were further selected by lottery system to constitute the sample for the study and equal number of responses were collected from each zone to have equal sample distribution.

Inclusion & Exclusion Criteria

Only private multispecialty hospitals of Delhi and NCR region, having a bed capacity of 250 or more beds, with a minimum number of 30 international patients in a month were a part of the study. No domestic patients were included in the study

Sample size

It was difficult to get the exact population for international patients as it was dependent on many factors, hence for an appropriate sample size, subject to variable ratio were used. The same has been used by many researchers for their studies (Rosengren et, al., 2018). It was also suggested by Natanson (2016) that 7 to 20 cases per variable create an appropriate sample size in cases where population cannot be ascertained. A total of 450 respondents (International patients and their attendants) for primary data collection were utilized for the study. As per literature, a ratio of 10:1 was considered ideal (Hair et, al., 2007).

ANALYSIS & DISCUSSION

The data was analyzed using effective tools to examine and evaluate the facts. In the current study, firstly the questionnaires were screened for their completeness and the responses scores were tabulated in MS-Excel thereafter the data was transferred to SPSS.

Case Screening

The data was checked for case screening to check on the missing values, unengaged responses as well as to find out the normality of the data. Once the screening was done, there were no missing data however there were a total of 33 unengaged responses which were found through application of standard deviation and cases wherein the standard deviation of more than 0.3 were present, were removed from the dataset for further analysis. After removing the 33 unengaged responses, data with 419 active cases were preceded further for Data analysis.

Demographic Analysis: The respondent's profiling was done based on the Age, Gender and Mode of Payment.

Table 1: Respondent's profiling

Demographic Variables	Description	Frequency	Percentage
	Male	293	64.8
Gender	Female	159	35.2
	0-25	17	3.8
	25-30	39	8.6
	31-40	23	5.1
	41-50	261	57.7
Respondents Age	above 50	112	24.8
	Cash	324	71.7
	Credit	65	14.4
Mode of Payment	Both	63	13.9

Table 1 revealed that most of the respondents were males, and respondents from the age group 41-50 were the highest. Patients preferred payment by cash.

Reliability: To check for the reliability of the constructs used in the study, internal consistency of the items constituting the drivers of CRM was checked through Cronbach α. Field (2009) proposed acceptable chronbach's alpha value of "0.5" Dall'Oglio et, al., (2010) was also of the opinion of alpha value of 0.5 as legitimate and acceptable. In the current study, Cronbach's α was acceptable if α was equivalent to 0.5 or more.

Table 2: Reliability for the drivers of CRM

Variables	Chronbach's alpha (α)
Physical environment	0.6
Technology	0.8
Relationship	0.5
Interaction	0.7
Service Quality	0.7
Price factor	0.8
Perceived value	0.8
Customer satisfaction	0.7
Trust	0.7

Table 2, above reveals that all the drivers of CRM had a chronbach's alpha value of more than 0.5, hence are acceptable.

Assumptions Check: The study involved regression analysis, hence the check for assumptions like Normality and multicollinearity were performed.

Normality: A check for normality helps us identify if the data set is modeled well by a normal distribution. The current study checked for normality through Kurtosis and Skewness. According to Sanchez (2015), the data can be said to be acceptable if skewness lies between   2 to +2 and kurtosis lies between   7 to +7.

Table 3: Normality Check

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
PE1	419	-1.022	0.119	2.842	0.238
PE2	419	-0.197	0.119	-0.138	0.238
T1	419	-1.531	0.119	4.526	0.238
T2	419	-1.416	0.119	3.554	0.238
T3	419	-1.465	0.119	4.063	0.238
T4	419	-1.921	0.119	4.843	0.238
T5	419	-1.83	0.119	4.792	0.238
R1	419	-0.413	0.119	1.665	0.238
R2	419	-0.806	0.119	3.659	0.238
R3	419	-1.03	0.119	4.65	0.238
I1	419	-0.821	0.119	3.134	0.238
I2	419	-0.516	0.119	2.063	0.238
I3	419	-0.592	0.119	2.162	0.238
I4	419	-0.772	0.119	2.472	0.238
SQ1	419	-1.595	0.119	5.469	0.238
SQ2	419	-1.246	0.119	5.958	0.238
SQ3	419	-1.061	0.119	4.069	0.238
SQ4	419	-1.235	0.119	4.326	0.238
SQ5	419	-0.974	0.119	3.527	0.238
PI1	419	-1.126	0.119	3.431	0.238
PI2	419	-1.292	0.119	3.286	0.238
PI3	419	-1.291	0.119	3.605	0.238
PI4	419	-1.366	0.119	3.538	0.238
PV1	419	-1.821	0.119	3.935	0.238
PV2	419	-1.673	0.119	3.581	0.238
PV3	419	-1.629	0.119	3.009	0.238
PV4	419	-1.495	0.119	4.02	0.238
CS1	419	-0.728	0.119	2.67	0.238
CS2	419	-0.076	0.119	0.278	0.238
CS3	419	-0.387	0.119	1.728	0.238
CS4	419	-1.003	0.119	3.39	0.238
CS5	419	-1.333	0.119	3.57	0.238
TR1	419	-1.299	0.119	4.79	0.238
TR2	419	-0.815	0.119	2.972	0.238
TR3	419	-1.396	0.119	4.458	0.238
TR4	419	-1.503	0.119	3.648	0.238
CL1	419	-1.464	0.119	1.538	0.238
CL2	419	-1.097	0.119	0.05	0.238
CL3	419	-0.854	0.119	-0.681	0.238
Valid N (listwise)	419				

Table 3 above shows that the data was well within the acceptable range of Skewness and Kurtosis as per the review.

Multicollinearity: Collinearity depicts a linear association between two predictors and Multicollinearity occurs when two or more predictors have high linear relation. As advised by Molala (2019), an absolute correlation coefficient of >0.7 indicates the presence of multicollinearity.

Table 4: Multicollinearity check

		PI	TR	PV	PE	T	R	I	SQ
Correlations									
PI	Pearson Correlation	1	.331**	.548**	.176**	.392**	.381**	.434**	.563**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000
	Sum of Squares and Cross-products	149.132	43.631	98.373	21.991	59.668	41.278	49.421	64.644
	Covariance	.357	.104	.235	.053	.143	.099	.118	.155
	N	419	419	419	419	419	419	419	419
TR	Pearson Correlation	.331**	1	.329**	.253**	.240**	.343**	.307**	.386**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000
	Sum of Squares and Cross-products	43.631	116.381	52.216	27.918	32.215	32.821	30.814	39.101
	Covariance	.104	.278	.125	.067	.077	.079	.074	.094
	N	419	419	419	419	419	419	419	419
PV	Pearson Correlation	.548**	.329**	1	.154**	.407**	.246**	.262**	.438**
	Sig. (2-tailed)	.000	.000		.002	.000	.000	.000	.000
	Sum of Squares and Cross-products	98.373	52.216	216.471	23.203	74.544	32.151	35.928	60.596
	Covariance	.235	.125	.518	.056	.178	.077	.086	.145
	N	419	419	419	419	419	419	419	419
PE	Pearson Correlation	.176**	.253**	.154**	1	.300**	.298**	.247**	.217**
	Sig. (2-tailed)	.000	.000	.002		.000	.000	.000	.000
	Sum of Squares and Cross-products	21.991	27.918	23.203	105.011	38.279	27.067	23.619	20.948
	Covariance	.053	.067	.056	.251	.092	.065	.057	.050
	N	419	419	419	419	419	419	419	419
T	Pearson Correlation	.392**	.240**	.407**	.300**	1	.296**	.323**	.539**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000
	Sum of Squares and Cross-products	59.668	32.215	74.544	38.279	155.323	32.666	37.561	63.145
	Covariance	.143	.077	.178	.092	.372	.078	.090	.151
	N	419	419	419	419	419	419	419	419
R	Pearson Correlation	.381**	.343**	.246**	.298**	.296**	1	.496**	.398**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000
	Sum of Squares and Cross-products	41.278	32.821	32.151	27.067	32.666	78.638	41.020	33.141
	Covariance	.099	.079	.077	.065	.078	.188	.098	.079
	N	419	419	419	419	419	419	419	419
I	Pearson Correlation	.434**	.307**	.262**	.247**	.323**	.496**	1	.419**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000		.000
	Sum of Squares and Cross-products	49.421	30.814	35.928	23.619	37.561	41.020	86.840	36.686
	Covariance	.118	.074	.086	.057	.090	.098	.208	.088
	N	419	419	419	419	419	419	419	419
SQ	Pearson Correlation	.563**	.386**	.438**	.217**	.539**	.398**	.419**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	
	Sum of Squares and Cross-products	64.644	39.101	60.596	20.948	63.145	33.141	36.686	88.354
	Covariance	.155	.094	.145	.050	.151	.079	.088	.211
	N	419	419	419	419	419	419	419	419

**. Correlation is significant at the 0.01 level-(2 tailed).

Table 4 above shows that no two predictors have a correlation coefficent>0.7, hence multicollinearity is not an issue.

Drivers of CRM

The technique of factor analysis was employed to extract the drivers of CRM as perceived by international patients in the Indian hospital setting. The elements considered for exploratory factor analysis were: Physical Environment, Technology, Relationship, Interaction, Service Quality, Price, Perceived Value and Trust. Principal component analysis using varimax rotation was employed to extract the factors. It was advised by Rahn (2019), items with factor loading of 0.4 and above should be acceptable.

Table 5: Drivers of CRM

Total Variance Explained			
	Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %
Factor 1 (PI)	3.16	10.193	10.193
Factor 2 (SST)	3.039	9.802	19.995
Factor 3 (TPE)	2.724	8.788	28.784
Factor4 (PV)	2.317	7.473	36.257
Factor5 (TR)	2.234	7.207	43.464
Factor6 (IR)	2.006	6.471	49.934
Factor7 (STI)	1.757	5.667	55.601
Factor8 (SQF)	1.28	4.128	59.729
Extraction Method: Principal Component Analysis.			

Table 5 above shows that 8 new components were extracted with variance of 59.729 %

Item I4, had a factor loading of less than 0.4, hence was not considered further. The new factors obtained after EFA had the following components:

Factor 1 (Price : **PI**) – PI1, PI2, PI3, PI4 ; Factor 2 (Self Service Technology - **SST**)– T4, T5, SQ1, SQ2, SQ4 ; Factor 3(Technology & Physical environment : **TPE**) – PE1, PE2, T1, T2, T3 ; Factor 4 (Perceived Value : **PV**)– PV1, PV2, PV3, PV4 ; Factor 5 (Trust : **TR**)– TR1, TR2, TR3, TR4 ; Factor 6 (Interactive Relationship : **IR**) – R1, R3, I2 ; Factor 7 (Special and timely Interaction : ST**I**) – I1, I3, R2 ; Factor 8 (Service Quality : **SQF**)– SQ3, SQ5

Relationship between Drivers of CRM and Customer Satisfaction

Cause and effect relation between the drivers of CRM and customer satisfaction was found using multiple regressions. Usually the model is considered a best fit around the observations if the value of R square is higher. It was emphasized by Chin (1998) that variance of 0.67, 0.33, 0.19 are considered substantial, moderate and weak respectively. It has been observed in the studies involving human behaviors; generally the R square is less than 50% as it is difficult to predict human beings than things.

Table 6: Model Summary: Effect of Drivers of CRM on Customer Satisfaction

Model	R	R Square	Adjusted R Square	Std. An error of the Estimate	Durbin-Watson
1	.648a	.420	.409	.32859	1.883
a. Predictors: (Constant), SQF, PV, STI, TPE, TR, IR, SST, PI					
b. Dependent Variable: CS					

Table 6 above shows that the drivers of CRM led to 42% variance in the satisfaction of international customers.

Table 7: ANOVA Test to check the significance of Regression Analysis

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	32.114	8	4.014	37.179	.000b
	Residual	44.268	410	.108		
	Total	76.382	418			
a. Dependent Variable: CS						
b. Predictors: (Constant), SQF, PV, STI, TPE, TR, IR, SST, PI						

From table7 above, it was found that the F value is 37.179, which is much more than 3.84, hence the predictive capability of the model explained by the identified drivers of CRM, i.e. 42% is significant and acceptable.

Table 8: Significant Drivers of CRM

Coefficients [a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.223	0.2		6.129	0
	PI	0.171	0.036	0.239	4.716	0
	SST	-0.095	0.038	-0.122	-2.501	0.013
	TPE	0.028	0.035	0.035	0.802	0.423
	PV	0.121	0.028	0.204	4.278	0
	TR	0.222	0.034	0.274	6.431	0
	IR	0.119	0.043	0.127	2.783	0.006
	STI	0.072	0.041	0.078	1.769	0.078
	SQF	0.062	0.035	0.079	1.786	0.075
a. Dependent Variable: CS						

The table 8 above shows that all the drivers except TPE, STI and SQF were significant since the p value for all the remaining drivers i.e. PI, SST, PV, TR and IR was less than 0.05. Trust out of all the drivers was the most significant such that with a unit increase in trust, Satisfaction of international patients increased by 0.274.

Moderating effect of Demographic variables on the dependent variables

Moderating effect of Age with Customer Satisfaction

The complete sample was distributed in 5 different age groups with the maximum respondents i.e. approx. 57.7% were from the age group of 41 – 50. To check whether any crucial difference exists in Customer Satisfaction with different age groups was determined by analysis of variance (ANOVA) using SPSS.

Table 9: Moderating effect of Age

		Sum of Squares	Df	Mean Square	F	Sig.
CS	Between Groups	.544	4	.136	.743	.563
	Within Groups	75.838	414	.183		
	Total	76.382	418			

As per table 9, the p value corresponding to Customer Satisfaction with age groups was more than 0.05. Since the p value is greater than 0.05, it can be deduced that there exists no significant difference in CS with age groups.

Moderating effect of Gender with Customer Satisfaction

In order to determine if there exists an essential difference in Customer Satisfaction with gender (Males and Female) an independent sample T test was applied by using SPSS.

Table 10: Moderating effect of Gender

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
CS	Equal variances assumed	.358	.550	-1.248	417	.213	-.05495	.04402	-.14146	.03157
	Equal variances not assumed			-1.256	292.260	.210	-.05495	.04375	-.14105	.03116

As per Table 10, the p value corresponding to Customer Satisfaction across gender was more than 0.05. Since the p value is greater than 0.05, it can be deduced that there is no significant difference in customer satisfaction across gender.

Moderating effect of Mode of payment with Customer Satisfaction

There were three categories of payments i.e. cash paying clients, credit clients as well as both cash and credit clients. To determine whether there exists a significant difference in Customer Satisfaction with mode of payment, an analysis of variance was applied by using SPSS.

Table 11: Moderating effect of Mode of Payment						
		Sum of Squares	df	Mean Square	F	Sig.
CS	Between Groups	.240	2	.120	.655	.520
	Within Groups	76.142	416	.183		
	Total	76.382	418			

As per table 11 the p value corresponding to Customer Satisfaction with mode of payment was more than 0.05. Since the p value is greater than 0.05, we can deduce that there is no significant difference in CS with mode of payment.

CONCLUSION

The research paper found that the drivers of CRM as perceived by international patients in context to Indian hospitals were; Price (PI), Self Service Technology (SST), Technology & Physical Environment (TPE), Perceived Value (PV), Trust (TR), Interactive Relationship (IR), Special Timely Interaction (STI), and Service Quality Factor (SQF), moreover one of the items I4 (Interaction variable) which was on the promptness of the frontline personals of the hospitals had a factor loading of less than 0.4, hence did not have much importance and thus was dropped from further study. Further the drivers of CRM explained the variance of 42% in satisfaction of international customers which is considered acceptable by Chin (1998). It was further observed that out of these drivers of CRM, important contributors leading to satisfaction in international patients coming to seek treatment at hospitals in New Delhi area of India were Price, Trust, Perceived value, Interactive relationship, and Self Service Technology. Many attributes under study were found to be acknowledged by the respondents like clean ambience of the hospital, convenience through online payment, complaints or issues resolving mechanism, ease in communication, access to information on products and services, reasonable treatment costs along with additional benefits, reliability of services.

The study also explored the moderating effect of age, gender and mode of payment on customer satisfaction and the results revealed that they did not have any effect on satisfaction of international customers.

However since the variance caused by the factors of CRM was less than 50% the study cannot be generalized and is limited to private corporate hospitals within Delhi – NCR region, so more research is required to understand the framework applicable to common hospital settings managing international customers irrespective of a specific location.

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