



**Research Article**

# **Impact of Customer Relationship Management on Customer Retention: A Study in the Private Healthcare Sector in Jaffna, Sri Lanka**

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## **Abstract**

*Customer retention is crucial to organizations for their sustainability. Retaining customers is cost beneficial rather than acquiring new. Building a mutually beneficial relationship with customers is becoming important in today's contemporary context. Organizations are trying to adopt Customer Relationship Management (CRM) to gain competitive advantages in day-to-day market especially for the sustainability of the business. CRM, as a strategy can improve the image of the organization and increasing purchasing intention of customers which gives room for customer retention. In this research, the researcher intends to study the impact of CRM on Customer Retention (CR) by focusing to the private healthcare sector in Jaffna District with the objectives to find out the followings: factors influencing the CRM in private sector healthcare organizations, the significant association between sub dimensions of the service quality and the significant differences in CRM practices adopted by private sector healthcare organizations. A list of registered private hospitals operating in Jaffna obtained from the Regional Director of Health Services in Jaffna and hospitals which are giving importance to CRM were considered for data collection. A questionnaire was developed for customers. It was intended to collect data from 500 patients as from the selected hospitals in Jaffna. Only 359 fully completed questionnaires were considered for analysis. The data were analyzed by using advanced multivariate analysis as Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA) and Structural Equation Modeling. These techniques were utilized to test measurement model and the research hypotheses. EFA was done through SPSS to identify the variable(s) as most contributors. Out of five well known SERVQUAL variables, only three were influenced highly. Besides, CFA was done through AMOS to find out the association of constructs comprising the measurement model, and the results showed that CRM had a significant and positive impact on customer retention.*

**Keywords:** Healthcare Organization, Customer Relationship Management, Customer Retention, Customer Loyalty, SERVQUAL.

## Introduction

Customer retention (CR) is a metric that measures customer loyalty, or the ability for an organization to keep its customers over time. In addition to identifying the number of loyal customers, customer retention can reflect or predict customer satisfaction, repurchase behavior, customer engagement and emotional ties to a brand or with an organization. While customer relationships typically begin with an initial interaction, customer retention metrics are related to the first purchase made by a customer and include all subsequent interactions. Once customer retention is measured, organizations can use this feedback to perform data analysis on components of customer experience and customer success. For example, if a drop in customer retention is reported, an organization can use this to help to identify the root cause and adjust its product offerings. Customer retention is critical because the cost of acquiring new customers is much higher than retaining existing customers. Retained customers are also more likely to engage in word-of-mouth marketing or become brand ambassadors.

Many businesses across the world are adopting CRM as a tool to get competitive advantages in market (Garatsa & Dlamini, 2021). Besides, CRM tries to highly satisfy the customer needs at every point of interaction between the customer and the organization (Shaon & Rahman, 2015). In this cue, CRM is considered as a customer-focused business approach which can enhance the reputation of the organization and image (Aiyer et al., 2019; Chen & Ching, 2007), increase the purchasing intention of customers (Kim & Ko, 2010), increase customer satisfaction (Hassan et al., 2015),

build and have strong mutual relationship between their own customers and the respective organization (Soltani & Navimipour, 2016), increase the excellence of services provided to customers (Lin et al., 2010), increase customer loyalty (Bhat & Darzi, 2016) and more importantly to attract and retain the customers with the organizations (Tifliyah et al., 2021). In line with the above facts, CRM has been referred to as “the heart” of marketing.

CRM is not a novel concept, and it is the extension of relationship marketing which is another well-accepted concept in marketing (Fotiadis & Vassiliadis, 2017). However, CRM is related with human attitude which is among customers and the organization that enthusiastically integrates sales with marketing, and customer care to create and add wealth for organizations and its customers (Chalmeta, 2006). Therefore, interest in CRM is gaining popularity among academics / researchers and business people (Badwan et al., 2017; Bhat & Darzi, 2016). Besides, CRM helps organizations to realize customer needs, helps to manage relationships with care and help to anticipate the future. Such information provides an important competitions among the organizations to increase market share and decrease operating costs with keeping their customers (Soltani & Navimipour, 2016). CRM continually extends the interest on satisfying buyers by rendering services through organizational activities which enables growth on customer confidence and this turn increases the firm’s knowledge about customer needs (Santouridis & Veraki, 2017). If organizations need to get a success in their marketing activities it is obvious that

they need to respond to their customer needs and through which organizations intend to improve value to both organizations as well to customers over time (Wu & Li, 2018). This repo becomes a strong relationship that enables coordination and inter-dependency.

Competition, driven by globalization, has changed the face of business. Developing intimate relationships with their own customers is more critical in the on-going tight competition with simultaneously increasing demands from customers. With this situation, most of the organizations understand the importance that they need to satisfy their own customers with the supreme care. Keeping our own customers is about five times advantageous than absorbing new customers with innovative strategies (Chiu et al., 2012; Han & Hyun, 2015). Thus, firms are now desperately creating new methods to manage customer relationships effectively and efficiently to recruit new customers as well retain on-going customers.

Particularly, an organization focuses completely on customer satisfaction with run in risk of attracting an identical brand which customers who believe that it only meets the minimum performance criteria for the category. Long-term customer retention in competitive markets requires the organization to go further mere basic satisfaction and to look for ways of establishing bonds of loyalty which will help in turn to retain very good customers without the attack of competitors. Organizations must consider customer attitudes with characters to manage successfully customer relationships. CRM is all about understanding the needs and behavioral attitudes of the customers which would help to have stronger relationships with them.

Thus, CRM is more important to measure satisfaction of customers because satisfied customers might defect, which customers who rarely do. Organizations have an opportunity to change satisfied customers as loyal customers who continuously approach them for their various needs. Customer satisfaction is the base for relationship marketing which later developed as CRM, it develops into customer loyalty and increased the retention rate. “Many researchers revealed there are close relationship among customer satisfaction, loyalty, and retention” (Eid, 2015; Gerpott et al., 2001; Khan, 2012; Ranaweera & Prabhu, 2003; Singh, 2006).

Organizations need to show their ability to keep existing and absorb new customers are not only depend to their products or services but related to how it serves their existing customers and keep the reputation that creates within the marketplace. Anyhow, CR is a driving force behind CRM (Tarannum & Rajnish, 2017). Whilst, maintaining a positive relationship with customers can eventually improve a greater customer loyalty and retention and also gives a suitable competitive advantage among other organizations (Bhat & Darzi, 2016; Sayani, 2015). Therefore, marketers are developing strategies in innovative ways to strengthen CR to maximize gains (Han & Hyun, 2015). More specifically, Bhat and Darzi (2016) pointed out that, CRM enables an organization to have better understanding about the customers. There are some literatures have focused on the link between CRM and customer satisfaction (Kaul, 2017; Rahimi & Kozak, 2017) and customer loyalty programs (Bhat & Darzi, 2016; Chen & Ching, 2007; Hosseini et al., 2010). In this sense, there have been several studies, empirically investigated the impact of CRM

on CR. The concept of CRM is not as popular in developing economies as like in western nations (Bhalla et al., 2008; Desai et al., 2007; du Plessis & Boon, 2004; Ramaseshan et al., 2006; Smyth & Edkins, 2007). Therefore, academics and research scholars in the developing countries located in South Asia, South East Asia and Africa are giving more importance on CRM creativities (Al-Hazmi, 2021; Boadu & Achiaa, 2019; Soliman & Kamel, 2021). Whereas, in the Sri Lankan scenario, concept as CRM is emerged as an important strategic tool in recent years (Adikaram & Khatibi, 2016; Kumarapeli, 2019; Weerasinghe & Warnakulasooriya, 2019). This study is under took by the researcher to fill the research gap by examine the CRM influences on CR in Private Healthcare Service in Jaffna, Sri Lanka.

The rest of the paper is organized as follows. Section 2 discusses the role of private healthcare sector in Sri Lanka. Section 3 presents literature review. Section 4 provides about hypothesis development. Section 5 reports the methodology. Finally, the conclusion and recommendations are provided in Section 6.

### **Role of the Private Healthcare Sector in Sri Lanka**

In Sri Lanka, private sector contribution to the healthcare is remarkable and it has shown an increasing trend immensely during the last two to three decades. There are quite a number of private healthcare service providing centers established in the recent past and many more are to come into operation soon with international standards and practices. It is wonderful as well proud to say that the service capacity of these healthcare institutions is ranging from vastly

sophisticated multi-specialization to small-scale medical laboratory centers. Apart from hospitals, there are another type of medical service providers are also in existence such as, Clinical Laboratories, X-ray Diagnostics Services, Physiotherapy & Rehabilitation Units, Ambulance Services, Home Nursing Services, and Centers for the disabled are also available. Many pharmacies are also operated as private ventures.

Besides, supplying, installing, giving basic technical related demonstration and servicing of high quality with sophisticated bio medical equipments are done by the private sector mostly with a prior agreement with respective customers. According to the available statistics it is evidenced that majority of patients who go for their medical requirements to the state sector healthcare institutions as Outside Patients Department (OPD) patients are approaching private sector for their various treatments. Furthermore, a large number of state-sector medical officers who are qualified specialists engaged in part-time private consultation providing very successful services in collaboration with the available limited number private sector qualified medical practitioners. Therefore, it is evidenced that the contribution is being made by the private sector is significant as well as in collaboration to the provision of health care in Sri Lanka as a developing economy, particularly in Prime as well as Tertiary care, but the actual achievements as well as contributions of the private sector were not considered in Sri Lanka for either for academic research or for any discussions. Because of confidentiality, they are reluctant to release such data either for discussions or analysis.

It is intended to compare and analyze certain available data among a few major private

hospitals in the northern part of the island in this research. Due to limited time and hardly non-availability of relevant real data, it may not be able to do a detailed analysis. Similar studies were done in our neighboring countries, especially in India (Shivakumar et al., 2018). It is believed that a sustainable collaboration in between state and private sector health care providers should be in existence with mutual inter-dependency is essential as well as precautionous. The above paragraphs give an understanding of the importance of the private healthcare sector contribution in Sri Lanka.

For this research, the researcher intended to select the Jaffna District Private Sector Health-care organizations only that comes under the Northern part of Sri Lanka because the development of private sector organizations was marked as a milestone during the post-war circumstances. For almost three decades North-East part of Sri Lanka was affected by prolonged unrest in the country for three decades. Private sector organizations could not show their emergence during this period. Further, the adoption of new concepts like CRM is still in the initial stage in the northern part of the country service sector like healthcare. The public in this area suffered a lot physically as well as mentally and because of that, they are not showing interest in adopting new aspects, not ready to believe in these new aspects. During the preliminary discussion with some officials of the selected private-sector healthcare service organizations in Jaffna, it was revealed that the intended level of successful retention through the introduction of CRM was unable to achieve and the reasons for the lapses could not be properly highlighted by them. Therefore, in this study, the researcher would like to focus on CRM

and customer retention in private healthcare services in Jaffna, Sri Lanka.

## Literature review

### Theoretical Literature

#### *Underpinning Theory*

The underpinning theory to this research study would be Social Contract theory. This theory was originated by Thomas Hobbes (1651) and it assists in explaining the mutual relationship between society and institutions. Social contract theory, seems to be an old as philosophy itself, is the view that persons' moral and / or political obligations are depended upon an agreement among them to form the society on which they belong. Even though this theory is fairly old but the applicability in the contemporary situation is in existence. Health care providers have a similar social contract as enforcement of legal aspects: to provide effective, on time services to individuals which in turn create equitable systems that safeguard the society. However, evidence suggests that bias and second-rate services define health care for many minority communities. The public outcry toward law enforcement should be a cautionary tale to those of us in the health sector. Amid myriad initiatives to preserve faith in health care providers, two tangible interventions stand out: engage trainees in the communities they serve and address implicit biases head on. As per the above-stated matters in the paragraph, the researcher found the Social Contract Theory could be related as an underpinning theory for this study.

### Empirical Literature

#### *Customer Retention*

Relationship marketing is the basic foundation of customer retention. Because

relationship marketing encompasses the generates new and mutual value in between organizations and individuals. Novelty and mutuality deepen, extend and long-lasting relationships, creating yet more opportunities for two parties to achieve mutual benefits. Maintaining long-term relations re-emerged as vital for the base of business success. Customer retention is concerned with maintaining good business relationship established between an organization and a customer (Mahmoud et al., 2018). Ascarza et al. (2018) defined the concept of customer retention is incorporating two aspects the first, the core of customer retention is continuing the customer interface with the organization. Second, it is the form of customer behavior i.e., behavior that firms intend to manage. Therefore, Ascarza et al. (2018) suggest that customer retention is the customer continuing to relationship with the organization. Thus, better CRM practices help to enhance customer retention. Besides, long-term customers who are satisfied with a company may be hesitant to switch to another, making it difficult for new competitors to enter the market or existing competitors to increase the market share.

### ***Customer Relationship Management***

CRM was defined from a general perspective as giving mutual benefits to both parties, organizations and customers. Since CRM seems to be a new concept for many businesses. But it cannot be avoided from marketing, sales as well as services and support perspectives. Moreover, the concept of CRM has become recognized as an important business strategy, but there is hardly no standard accepted definition of CRM. Farmania et al. (2021) defined CRM as an “organizational strategy to understand and

influence customer behaviour through beneficial communications to improve customer recruitment, customer retention, customer loyalty, and customer beneficial”. Kincaid (2003) viewed CRM as “the tactical use of information, processes, technology, and people to manage the customer relationship with the organization (Marketing, Sales, Services and Support) across the whole customer life period”. Furthermore, “CRM is crucial for identifying target customers, ensuring their loyalty, streamlining operations, and forecasting demand” (Bhat & Darzi, 2016).

Besides, CRM has intention of improving marketing and communication which in turn currently revolutionizing the company-customer relationship.

### ***Customer Relationship Management and Customer Retention***

In this hyper-competitive business context, most organizations began to focus more and more on CRM as part of their business operations. Further, CRM has been called an inevitable and relentless movement because it represents the means customers wish to be served and offers better than the firm’s rivals (Peppers & Rogers, 2016). Therefore, prior research has exhibited that CRM has a noteworthy impact on attitudes of the customers (Lee & Lambert, 2008; Maggon & Chaudhry, 2018), purchase intentions (Dastane, 2020; Zhang et al., 2020), consumer-company identification (Elbedweihy et al., 2016; Wu & Tsai, 2008), satisfaction (Kumar et al., 2022; Rahimi & Kozak, 2017), loyalty (Abekah-Nkrumah et al., 2021; Khan et al., 2022), and retention (Simanjuntak et al., 2020).

The customers who have the supreme tactical value to an organization could be considered as prime customers for retention efforts. These customers are defined as having improved value over their lifetime or who are otherwise tactically significant as high returning customers, benchmarks, stimuluses, or door openers. On the other hand, the cost factor also needs to be taken into consideration regarding customer retention because it causes considerable costs where the retention strategy needs to be very attractive compared with competitors. CRM managers and academics have long recognized the importance and, in fact, the essentials of retaining customers (Ascarza et al., 2018). Further, an improved relationship with an organization's customer will ultimately result in superior customer loyalty and retention which gives a better competitive advantage over other firms (Brun et al., 2016; Ngai, 2005; Sayani, 2015). Bhat and Darzi (2016) noted that CRM has interaction both directly and indirectly with satisfaction and retention, which finally leads to better turnover.

### Development of Hypothesis

Continuous advances in information technology are empowering business entities to more efficiently and effectively direct their CRM efforts on retention (Chatterjee et al., 2021; Hassan et al., 2019). Especially, enhancing profit and having a long-lasting relationship with customers is a preliminary element in the service industry (Ofosu-Siaw Boateng, 2017). Due to that fact service providers efficiently practice CRM as a strategy to achieve competitive advantage and can retain their customers (Bhattacharya, 2011; Sharma & Goyal, 2011). Therefore, the existing studies pointed out that retained

customers are an essential business asset for an organization and these assets can not be duplicated by competitors. Further, McKim and Hughes (2001), suggests that customer acquirement and customer retention as the main purpose of CRM. Based on the literature, many organizations invest greatly on CRM strategies to create and cultivate long-lasting and beneficial relations with customers (Ofosu-Siaw Boateng, 2017). In addition, the existing academics proved that there must be a strong integration of customer retention through CRM strategies (Akintunde & Akaighe, 2016; Al-Hazmi, 2021; Becker et al., 2009; Chadha, 2015; Collier & Bienstock, 2006; Kotler & Armstrong, 2013; Zineldin, 2006). The above description indicates a durable connection between CRM and customer retention. Therefore, in this study, researcher proposes the following hypothesis:

#### ***H<sub>1</sub>: Customer Relationship Management Stimulates Customer Retention***

The recent past era witnessed as a period of dramatic and far-reaching change within the service industry namely, deregulating, the arrival of new technology, a sharp strengthening in competitive pressures, and a shift in the balance of negotiating power away from supplier to customer, may all be combined to produce a noteworthy increase in the service sector. This shows the vital role played by service sector organizations in Sri Lanka with the importance given by the Government to sustain it. Therefore, this research also focuses on how the sub-dimensions of CRM impact on customer retention. In this cue, organizations implement CRM to achieve certain business results, which are mirrored in their expectations of CRM. The objectives of having CRM in organizations are, to improve

customer satisfaction levels, retain customers, improve customer lifetime value (CLV), deliver better tactic information to relevant departments, attract new customers, and reduce costs (Xu & Walton, 2005).

Drawing on the scholarly work of Horn et al. (2005), this study adopted the SERVQUAL model to measure CRM. Horn et al. (2005) argued the following facts. “SERVQUAL lays the foundation for the relationship attributes part of the survey used in this study. Customer expected items from four of the SERVQUAL dimensions: tangibles, reliability, responsiveness and empathy are included in this instrument” (Horn et. Al, 2005 p.103). Based on the above lines of arguments in the extant literature, the researcher adapted the SERVQUAL model which was established by Parasuraman et al. (1988) to measure CRM in the healthcare context. As such, the research systematically adapted the measures as per the customer relationship attributes of the healthcare service sector.

It is said that tangibility includes some functional elements like layout, comfort, and privacy and also aesthetic elements such as the architecture, colour, materials, and style of the healthcare centers. Further, it refers to the appearance of a hospital and its staff, the availability of equipment, facilities and visual materials, and the patient convenience time. A good layout and attractive service materials provide customers with a good impression and attitude toward the healthcare institution. This indicates a possible association between the physical aspect and customer retention. Besides, reliability is a combination of keeping promises and performing services right. This ensures that the hospitals can deliver the services that have been promised

to customers accurately and without error. If a hospital maintains its promises, it will increase a patient’s confidence and retention with a healthcare organization.

Responsiveness shows the service personnel being courteous, helpful, inspiring confidence and trust in customers. Generally, healthcare firms have courteous and helpful staff, who motivate confidence and trust among customers/patients. Front office employees play a lead role in a customer service institution and it is the responsibility of the firms to provide prompt services that induce keep the customers with them. Assurance is the knowledge and courtesy of employees in the organization and that inspires the trust and confidence of the customers. Simply the healthcare organization can handle potential problems such as patient complaints, lack of privacy, delays in care, communication issues, poor information, etc. When patients’ complaints are dealt with or their problems are resolved, they all feel satisfied with the healthcare services and have the credibility and favorability perception of the healthcare’s services. At this point, they all continue to get services in a particular hospital, which shows an association between assurance and customer retention. Moreover, empathy includes the caring and individual attention that healthcare institutions provide to their patients. Patients are more likely to visit or get services from these institutions with effective personal care. In addition, empathy is value-added for the customers/patients which builds trust and confidence in them at the same time it enhances customer loyalty and retention.

The effect of service quality magnitudes on customer retention has been demonstrated



by several previous studies (Alshamsi et al., 2021; Hong-kit Yim et al., 2004; Maladi et al., 2019; Parida & Bakshi, 2011). The above discussion indicates a strong connection between dimensions of service quality and customer retention. Hence, in this study, the sub-dimensions of CRM are expected to have a optimistic and importance influence on customer retention in healthcare. Therefore, the following hypotheses are formulated:

$H_{1a}$ : Tangibility influences customer retention

$H_{1b}$ : Reliability influences customer retention

$H_{1c}$ : Responsiveness influences customer retention

$H_{1d}$ : Assurance influences customer retention

$H_{1e}$ : Empathy influences customer retention

### Conceptual Model

Based on the above literature review and theoretical relationships, a conceptual model has developed for this study, which is demonstrated in Figure I given below and developed for the research purposes. This model describes the influence of CRM and its Sub-dimensions on customer retention.

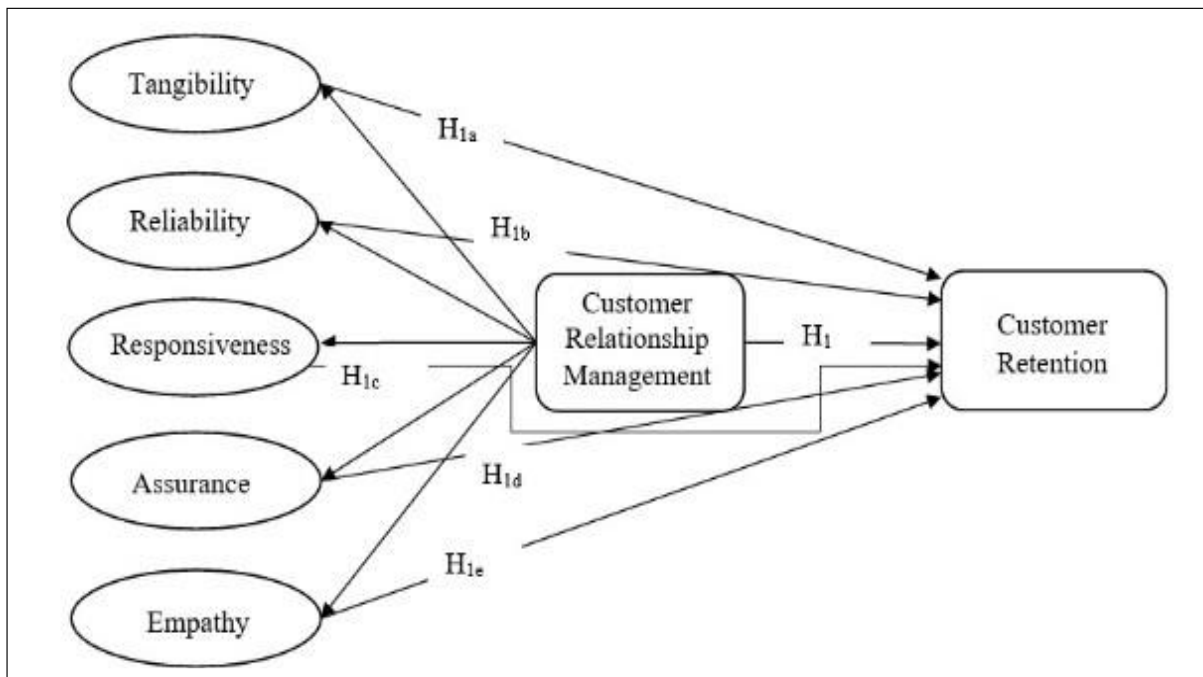


Figure I: Conceptual Model

## Methodology

### Research design and Sample

The intention of this research is to determine how CRM affects customer retention in the private healthcare industry in Jaffna, Sri Lanka. Therefore, in this study, a unintended research approach was used under the

conclusive research design to approach the research questions and hypotheses systematically and effectively (Bougie & Sekaran, 2019). Besides, the researcher in this study used a self-administered standard questionnaire as a research instrument to collect the data. In this manner, patients / customers who take the medical services from selected (Out of the registered private

sector healthcare organizations list received from the Regional Director, Health Services around 50 organizations found to be practicing by maintaining customer database) private healthcare organizations in the Jaffna peninsula of the Northern Province of Sri Lanka are considered as a sample unit where purposive sampling technique was adopted

for data collection. Jaffna peninsula consists of Valikamam, Thenmaratchi, Vadamaratchi, and Islands. Further, analysis was conducted using 359 valid replies out of the 412 respondents who completed the questionnaires. Table I provides a summary of the respondents' demographic information of the respondents.

**Table I: Respondents' demographic information (n = 359)**

Category	N	(%)
<b><i>Respondents</i></b>		
<b><i>age</i></b>		
Below 18 years	18	5.0
18 to 25 years	54	15.0
25 to 40 years	107	29.8
40 to 55 years	74	20.6
Above 55 years	106	29.5
<b><i>Marital Status</i></b>		
Bachelor/ spinster	93	25.9
Married	266	74.1
<b><i>Treatment Experience</i></b>		
Below 1 year	132	36.8
1 to 2 years	79	22.0
2 to 3 years	43	12.0
3 to 4 years	33	9.2
4 to 5 years	23	6.4
Above 5 years	49	13.6
<b><i>Educational Qualifications</i></b>		
Below grade 8	94	26.2

G.C.E.O/L	100	27.9
G.C.E. A/L	111	30.9
Graduate	44	12.3
Postgraduate	06	1.7
Professionally qualified	02	0.6
Other	02	0.6
<b>Category</b>	<b>N</b>	<b>(%)</b>
<b><i>Respondents Profession</i></b>		
Junior Executive	07	1.9
Mid-level manager	02	0.6
Senior Executive	07	1.9
Housewife	104	29.0
Unemployed	24	6.7
Student	55	15.3
Other	160	44.6
<b><i>Monthly Income</i></b>		
Below Rs 25,000	164	45.7
Rs 25,000-50000	145	40.4
Rs 50000-75000	34	9.5
Rs. 75000-100000	14	3.9
Rs. 100000-150000	01	0.3
Above Rs. 300000	01	0.3

### **The Survey Instrument and Measure Development**

The questionnaire was divided into two parts: the first dealt with the demographic profile of respondents whilst the second dealt with the study variables. Antecedents of CRM (tangibles, reliability, responsiveness,

empathy, and assurance) were measured by using twenty-four (24) items which are adopted from Chingang Nde and Lukong (2010). Further, six (06) items have been used to operationalize to measure the corporate image adapted from Ishaq (2012) and Yeo and Youssef (2010). Customer orientation

was measured using five items obtained from Korschun et al. (2014) and Alteren and Tudoran (2016). Finally, four items were adopted from Tarannum and Rajnish (2017) to evaluate the redress system. Further, the respondents are requested to answer questions related to each variable to obtain information needed by using the five-point Likert Scale. The example of a five-point Likert Scale is, 1 = Strongly Disagree, 2 = Disagree, 3 = Neither Disagree nor Agree, 4 = Agree, 5 = Strongly Agree. In addition to that, researcher conducted pilot test with 30 respondents before the actual questionnaire was distributed. The study variables and its subscales shows the internal reliability, with the Cronbach's alpha value as above 0.7 (Hair et al., 2013), at the same time item-total correlations value also above the threshold level (>0.3) (Nunnally, 1978). Therefore, the researcher proved that the questionnaire was valid, reliable, and ready for distribution to the sample respondents. The survey instrument originally in English was translated into Tamil, the respondents' first language. Based on feedback the pre-testing of the survey, it was deemed appropriate to administer.

**Analysis**

Numerous statistical tests were carried out to find the answer to the research question, this includes exploratory factor analysis (EFA), confirmatory factor analysis (CFA), and structural equation modeling (SEM). Alignment of the constructs was accomplished using EFA, and the factors were confirmed using CFA. Finally, SEM was used because it permits simultaneous testing of all model variables. For the above purposes, the statistical tools of SPSS version 23 and AMOS version 23 were used for data analysis.

**EFA and CFA Analysis**

EFA is being conducted with Kaiser normalization and Principal Component Analysis with Varimax rotation method to determine the factors that contribute to CRM and customer retention of healthcare centers (Kinnear and Gray, 1999). Prior to the analysis of EFA, the appropriateness of using EFA is determined by the results of KMO and Bartlett's test of sphericity (Galahitiyawe, 2013). The result of KMO & Bartlett's Test of Sphericity is displayed in Table II (given below) for CRM and Customer retention.

**Table II: KMO & Bartlett's Test of Sphericity for the Constructs of CRM and Customer Retention**

KMO and Bartlett's Test		CRM	Customer Retention	For All
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.865	0.714	0.932
Bartlett's Test of Sphericity	Approx. Chi-Square	727.731	397.191	1507.833
	Df	10	03	28
	Sig.	0.000	0.000	0.000

Based on Table II above, the KMO values for all hypothesis are shown as above 0.7, which falls under the range of Middling and Meritorious Sivathaasan and Chandrasekar (2013), the guidelines to interpret the Kaiser-Meyer-Olkin. Further, Bartlett's Test of Sphericity shows substantial value for the hypothesis considered for testing in this research and justifies that each hypothesis associates perfectly itself. In addition, the results of KMO and Bartlett's test of sphericity shows the value of  $p < 0.001$  which allows forwarding the data of this research for the EFA.

Afterwards, EFA is performed for each construct. Guadagnoli and Velicer (1988), stated that the loading should be greater than or equal to 0.60. Generally, a communality (loading) greater than or equal to 0.70 is ideal because that suggests that averagely 50 percent of the variance of that item is accounted for by the particular factor. Table III (given below) summarizes the EFA for CRM and customer retention. EFA of CRM produced three factors (eigenvalue > 1). Hypothetically, there are five factors contributes CRM. However, the observed data clearly separated them into three (03) and one (01). Factor 1 (labelled as 'Assurance'), contained seven items and explained 53.24% of the variance in the data with an eigenvalue of 10.65. at the same time Factor 2 (labelled as "Reliability"), consists of nine items and explained 6.24% of the variance in the data with an eigenvalue of 1.25. While a loading of the other four items in factor 3 (labelled as "Tangibility"), accounted for 5.5% of the variance with an eigenvalue of 1.1. However, these three factors measure 64.96 percent among the

total variance, which is appropriate. Next, the EFA for customer retention is evaluated. The eigenvalues > 1 generated four factors. Therefore, the unidimensional of the construct is fully assured. The total variance explained by the four factors is 71.55 percent which further indicates that the data observed showed a successful illustration. The four factors of customer retention, such as corporate image, redress system, customer orientation, and environmental concern. All factor values have been shown as above 0.5, which specifies satisfactory merging as well.

On average, AVE of less than 0.5 shows that, more error ruins in the item than the variance explained by the concealed factor structure imposed on the measure (Hair et al., 2006, Lu et al., 2007). According to Table III (see appendix), only one variable (Tangibility = 0.428) has lower convergence validity (AVE), even though it values near 0.5. Moreover, standardized regression weights of each item have a value of above 0.5 and it maintained an appropriate level of rationality.

This indicates that at least 50 percent or more of the variances in the variables observed are explained by the set of indicators. However, with regards to TAN, it is also showing satisfactory level, as not only do the direct paths between these items and their respective dormant variables indicate significant P-values but they could also maintain a satisfactory level of complex reliability. Besides complex reliability value of all variables ranges from 0.747 to 0.937, this means that they have a higher level of reliability in their measurement of the same hypothesis {Nunnally, 1978 #43}.

Table III: EFA and CFA

Variable	Item No	EFA	CFA
		Factor loading	Std. Reg Weights ( $\lambda$ )
<b>Assurance (AVE= 0.597, CR = 0.912)</b>			
Employees give patients personal service	ASS1	0.766	0.760
They treat their patients' best interest at heart	ASS2	0.751	0.784
The hospital gives personal attention to their patients	ASS3	0.733	0.790
The operating hours are convenient to patients	ASS4	0.728	0.790
The employees understand the specific needs of their patients	ASS5	0.709	0.800
Their employees are polite	ASS6	0.622	0.726
The available services in the hospital be in good quality	ASS7	0.597	0.758
<b>Reliability (AVE=0.607, CR=0.933)</b>			
The hospital keeps their records accurately	REL1	<b>0.812</b>	0.796
The hospital provides their services at the time they promise to do so.	REL2	0.789	0.769
The behavior of employees instill confidence in patients.	REL3	0.692	0.825
Employees make information, those are easily obtainable by the patients	REL4	0.684	0.817
The hospital performs the service right at the first time	REL5	0.681	0.766
Patients feel safe in their transactions with employees in the hospital.	REL6	0.650	0.824
Employees are always willing to help patients.	REL7	0.587	0.764
Employees never show that they are too busy to respond to patients' requests.	REL8	0.561	0.728

When the hospital promises to do something by a certain time, they keep on to do so.	REL9	0.504	0.714
<b>Tangibility (AVE=0.428, CR=0.747)</b>			
The physical facilities (equipment, facilities, spacing, lighting, etc) should visually appealing	TAN1	0.804	0.664
The employees are well dressed (uniform) and appear neat.	TAN2	0.681	0.526
My hospital has modern equipment.	TAN3	0.623	0.663
The physical environment of the hospital is clean.	TAN4	0.560	0.746
<b>Corporate Image (AVE=0.564, CR=0.921)</b>			
This hospital is open to all	COI1	0.836	0.768
This hospital has an overall clean environment/reputation	COI2	0.823	0.742
This hospital has good transparency in all aspects	COI3	0.800	0.762
This hospital anticipates well about the needs of services by customers	COI4	0.735	0.755
This hospital takes immediate steps when any complaint received	COI5	0.691	0.766
This hospital is very much eco-friendly	COI6	0.688	0.681
This hospital gives remedies to the customers who lodge complaints	COI7	0.673	0.774
This hospital handles satisfactorily when a complaint received	COI8	0.668	0.740
I am very much satisfied with the procedures in remedial action taken.	COI9	0.665	0.766
<b>Redress System (AVE=0.882, CR=0.937)</b>			
This hospital is ready to give financial compensation to the affected customers.	RED1	0.925	0.933
This hospital realizes that redress has a positive impact on satisfaction and revisit / re-approach by the complainant.	RED2	0.920	0.945

<b>Customer Orientation (AVE=0.542, CR=0.764)</b>			
This hospital responds as soon as possible when a request/suggestion/recommendation is received.	CUO1	0.730	0.392
This hospital has a very good understanding of how customers judge the quality of their service	CUO2	0.626	0.879
This hospital regularly evaluates the level of satisfaction by collecting feedback from its customers about the quality of service.	CUO3		0.836
<b>Environmental Concern (ARV=0.731, CR=0.845)</b>			
This hospital invests in energy conservation.	ENC1	0.903	0.837
This hospital practices 3R (Recycle, Renovate & Reuse) concept.	ENC2	0.891	0.873

After this, the researcher evaluated the discriminant rationality. As mentioned earlier, discriminant rationality is the extent to which a hypothesis is truly different from other hypotheses (Galahitiyawe, 2013). It is said that high discriminant rationality shows that a hypothesis is unique, and captures some phenomena other measures do not (Byrne, 2016). EFA is a cue of discriminant rationality, and as such, by associating the loadings and cross-loadings between the distinct indicators and the hypothesis, each indicator should load highly with its own hypothesis than others. Furthermore, it can be appraised with the pair-wise comparison of Average Variance Extracted (AVE) of the latent hypothesis, and Squared Multiple Correlations (SMC) between dormant hypothesis (Hair et al., 2006). Accordingly, this study applied a pair-wise comparison to test the discriminant rationality.

### Discriminant Validity

As Table IV (given below) illustrates the Squared Multiple Correlation (SMC) matrices used to assess discriminant validity. The AVE scores are written crosswise, are used for squared correlation value comparison. If the AVE scores are more value than the squared correlations values, the discriminant rationality is said to be present. Consistent with Table IV, the popularity of variables has a high level of discriminant rationality. Only ASS and REL are weak in discriminating their own items from other hypotheses.

### Structural Equation Models with Hypotheses Testing

To conclude the sample structural model is taken into the consideration, such as unintended relationships and calculations (Galahitiyawe, 2013).



Table IV: SMC and AVE matrix for Discriminant Validity

AVE	ASS	REL	TAN	COI	RED	CUO	ENC
ASS	<b>0.597</b>						
REL	0.656	<b>0.607</b>					
TAN	0.321	0.406	<b>0.428</b>				
COI	0.426	0.515	0.294	<b>0.564</b>			
RED	0.189	0.227	0.133	0.196	<b>0.882</b>		
CUO	0.258	0.245	0.115	0.263	0.102	<b>0.542</b>	
ENC	0.073	0.076	0.022	0.118	0.042	0.045	<b>0.731</b>

Tests for multivariate assumptions have been carried on, and the data appropriateness is ensured for multivariate analysis. The relationship between exogenic and endogenic variables presented by the structural model. It suggests a direct test of the theory of interest (Lu et al., 2007), as the linear regression effects was captured by the structural model and the exogenous constructs on the endogenous constructs, and the regression effects of the endogenous constructs upon each other (Hair et al., 2013). In this regard, the researcher used SEM modelling to test the hypothesis. Referring to Figure II (given below), customer relationship management is an exogenous construct that impacts customer retention.

For the above-suggested structural model, the indices of absolute and incremental showed a marginal model fit only. The value of CIMIN/DF is 3.200 which is perfectly below the cut-off value of 5 and the RMSEA is 0.078 (<0.08), proving the absolute model fit. Meanwhile, IFI and CFI achieve a satisfactory level of model fit. PRATIO, shows a good parsimony level (0.930) which

is above 0.9. Therefore, this model allows researcher to make conclusions on its hypothesized relationship. As per the Figure III (given below) the results indicate that the effects of CRM on customer retention is positive ( $\beta = 0.99$ ) and significant ( $P < 0.05$ ), thus the basic hypothesis (H1) is accepted. This aligned with the literature mentioned above and enables to further confirm the same situation in Sri Lankan healthcare context.

The GOF values of this model as follows: value of CMIN/df is 4.208 and it is below the cut-off point. Hence, the model is fits as per Chi-Square value to degrees of freedom. Also, fit indices, i.e., CFI, GFI, and AGFI, are close to 1, with TLI, IFL show closer to the value 0.90. In addition, RMSEA and RMR values comes below the cut-off points. These indices suggest that this model has good approximation to the sample data. Based on the above statistical foundation researcher also making the conclusion on the hypothesized relationship. The following Table V (given below) explains the statistical finding.

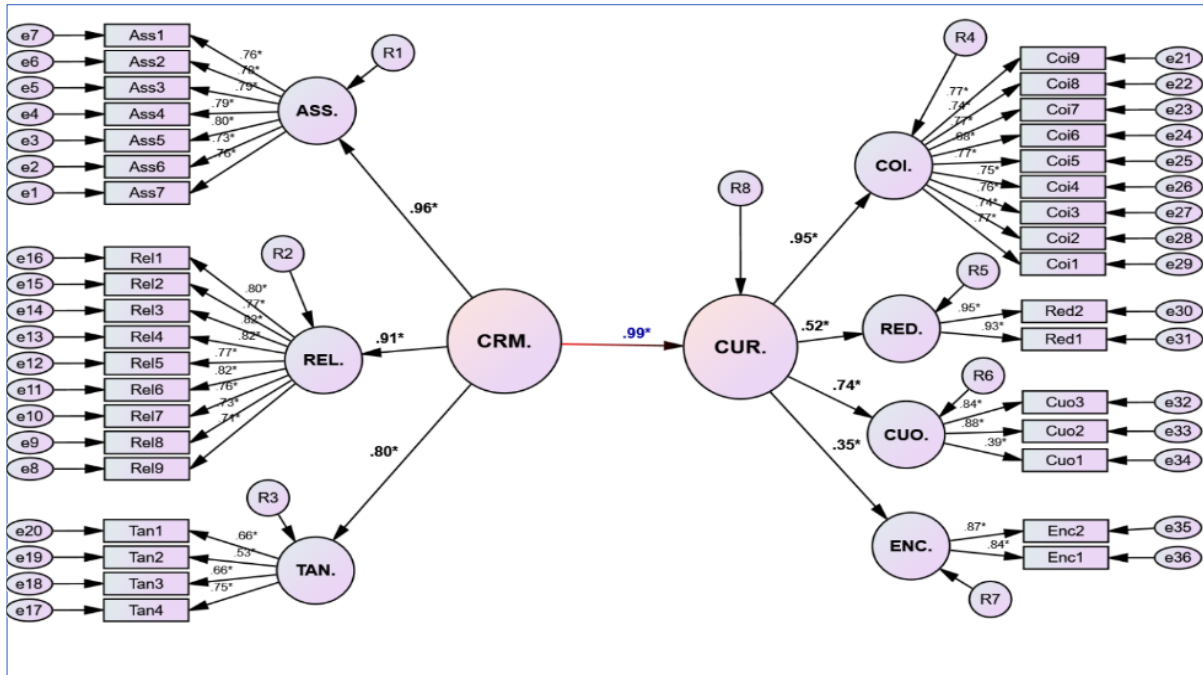


Figure II: Basic Structural Model (CRM→CUR)

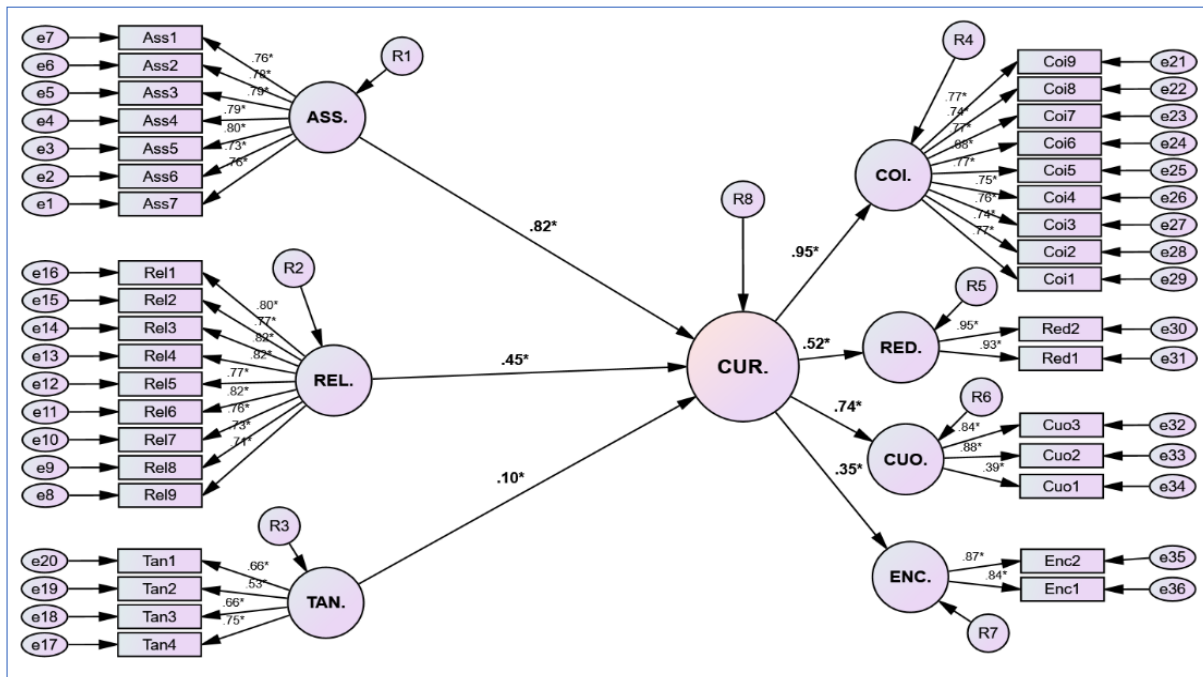


Figure III: SEM for Dimensions of CRM (ASS→CUR, REL→CUR, and TAN→CUR)

From the results of the Table V, the three hypotheses, H1a, H1b, and H1c are accepted.

**Table V: Summarizes the statistical finding related to the stated hypotheses**

Path	Hypotheses	B Value	P-value	Decision
ASS → CUR	H <sub>1a</sub> : Assurance influences customer retention	$\beta = 0.82$	$P < 0.05$	Significant
REL → CUR	H <sub>1b</sub> : Reliability influences customer retention	$\beta = 0.45$	$P < 0.05$	Significant
TAN → CUR	H <sub>1c</sub> : Tangibility influences customer retention	$\beta = 0.10$	$P < 0.05$	Significant

## Discussion

In the current scenario, CRM has become an emerging topic at a globalized level. In the South Asian region, especially in Sri Lanka, business planners and practitioners of marketing are increasingly concerned with CRM and its implications for the firm's success. Hence, CRM was selected as a theme to ground the research in an emerging country like Sri Lanka, where CRM and its practices are in the awakening stage. Hence the main aim of this study is to investigate the impact of CRM on customer retention in Private Sector Healthcare in the Sri Lankan context. The results of the study indicated that CRM practices by private healthcare institutions have a significant impact on patient retention. Besides, the empirical evidence found that CRM has significant as well as positive impact on customer/patient retention ( $P < 0.05$ ;  $\beta = 0.99$ ). It is evidenced that when the updated database of patients is kept properly by organizations that motivate psychologically to their customers in a way, people realize that such organizations have cared for them. It voluntarily encourages people to stay continuously with the organization. This would be the intention of almost all organizations to sustain their customers with them. To validate this, the research also proved that CRM has a good

significant impact on customer retention as far as the Sri Lankan perspective is concerned. These findings are very much consistent with relevant literature mentioned earlier (Anees et al., 2020; Ascarza et al., 2018; Bankole et al., 2020; Boadu & Achiaa, 2019; Brun et al., 2016; Chadha, 2015; Ofosu-Siaw Boateng, 2017; Qasem et al., 2016; Verhoef, 2003).

Besides, it is revealed that the following three factors are contributing more and could be considered as the most influencing factors on the CRM in private sector healthcare organizations. Based on the study finding, the factor 'Assurance' has a beta value of 0.82 which takes the first place compared with the P-value 0.05 ( $P < 0.05$ ;  $\beta = 0.82$ ). The second place is taken over by the factor 'Reliability' with a beta value of 0.45 which is also greater than the P-value 0.05. Then the third place goes to the factor 'Tangibility' with the beta value of 0.10 which is again greater than the P-value of 0.05. This finding is well supported by the results of the study put forward by (Ghandour et al., 2015; Hamilton-Ibama, 2020; Jatav, 2017; Mwangi, 2018; Wubo, 2018).

As mentioned in earlier the famous SERVQUAL model with the well-known five variables [Assurance, Empathy,

Reliability, Responsiveness, and Tangibility] was considered for this research and during the EFA it was revealed that out of the above five only three variables [Assurance, Reliability, and Tangibility] influence highly on CRM which leads to customer retention in private healthcare organizations in Jaffna, Sri Lanka. This is evidenced during the interview time with respondents, they pointed out that since these organizations are concerned with healthcare similar to lifecare whatever assurances are given by the need to be met on the specified time comes; the customer should rely on the services provided by the organizations because they depend on them for all treatments. If the customers started to doubt the services provided by these organizations that point is dangerous and uncertain to the organizations and their image might get spoiled.

## **Conclusion and Recommendations**

### **Theoretical Contribution**

This research study focused on Social Contract Theory which says about mutual interdependence between the institutions and the society. As per this theory, this mutual interdependency reveals that institutions need to provide services for the well-being of the general public whereas in turn general public should provide some contributions to the institutions for their existence.

It is common that various public as well as private institutions were set-up in the economy with the intention to provide satisfaction by providing services. Accordingly, healthcare organizations were also existing in the society to provide health services to the public who approach them with various requirements. By providing

satisfactory services these organizations try to maintain a database about their customers and through which they try to keep them for their future requirements and that in turn will help the organizations for their survival which very important. The intention of keeping customer database is vital for the organizations because of the contemporary strong competition among the organizations survival is coming under a big challenge. So, to overcome this threat keeping database and through which providing better services to their customers throughout their life-time is seems to be an important role of these private healthcare organizations.

Further, the organizations satisfy their customers, in turn, it increases the satisfaction of the stakeholders. Especially, market-oriented private sector organizations need to be vigilant in stakeholder satisfaction because stakeholders play a vital role in the decision-making of such an organization. These decisions contribute a lot to the survival of such organizations. In addition, private sector organizations are market-oriented, so they need to show a relatively high degree of concern for their sustainability. If we see the applicability of this theory in the healthcare sector where customers (patients) are coming with the common expectation of getting cured of whatever their illness is without hurting others. It is expected that the hospital should provide all the measures to get the patient cured this is implied and further when a hospital provides facilities it should be in an ethically acceptable manner. This is also an implied expectation by the customers. If and when a hospital failed to follow these basic ethics the consequences of that might be a negative effect on all concerned i.e. Patients,

the Hospital, Stakeholders, Society, and the Nation at large.

### **Practical Contribution**

Besides the theoretical involvement, this study's findings have some real-life implications for various parties. First to the hospital administration: The administration should be transparent in all aspects because reliability comes as an important factor contributing to customer retention. They should meet all the promises if any, they made to their customers with promptness and time-bound where needed because assurance is another contributor to customer retention. Further, the administration should take steps to make all facilities and assets, visible to customers and other stakeholders because tangibility also comes as another important contributor to customer retention. Second, the employees who are working in these healthcare centers: Hospital staff need to be very polite and empathically react with their patients because most of them are coming to the hospital with sorrow, depression, nervousness, etc. due to their illness. Thus, they need to be cautious with their patients. Furthermore, under any circumstances, staff should not neglect any of their patients because that might spoil their personal as well as the organizational image. Therefore, personnel need to realize that they are responsible for their actions and that might hinder all if they made a mistake. Next, the patients of these healthcare institutions: Patients should declare all the details about their illness without hiding anything to show trust with hospital staff. Patients should also be courteous with staff, and treat them as human beings. Moreover, patients should be obedient to the instructions, rules, and regulations of the hospital as their

organizational culture. More importantly, patients need to declare all their details with good faith in their minds and with due concern. Finally, to the general public: The general public should respect a hospital and its staff with concern. They need not comment or share any information in any media about any hospital or its staff without justification. Besides, the general public should not go against any hospital or its staff in order to tarnish their reputation in the absence of facts or occurrences.

### **Limitations and Future Research Directions**

Despite the contribution made by this study; it has some limitations. This study was done in a very limited area, Jaffna District. This area was severely affected during the three decades of prolonged unrest in the country which came to a halt in 2009. The rapid development took place in the north and east part of the country which includes the research area as well. Because of this reason comparing the status of private sector healthcare organizations available in the other parts of the country with the same organizations established in these areas after 2009 is worthless.

Further, the data were collected in a certain period, early 2019, since this study has a limited focus on technology-related strategies there might be some vital changes happening in the focused organizations day by day. Due to unavoidable circumstances, the researcher could not concentrate longer period on data collection. Since this study is based on a limited area of the country inevitably the respondents belong to a particular ethnic community, Tamils only. These might be a major limitation of this study.

As we have seen that the CRM principle proved its importance to sustain the business by keeping their customers and similar things may be available in other related sectors so future researchers could study the same aspect in other service sectors like banking, insurance, communication, teaching/higher education, etc. Further, this study focused on a particular geographical area in Sri Lanka, Jaffna, so the same study could be applied in other areas in the same province or even in other provinces in Sri Lanka. In addition, a similar study could be done on the state sector healthcare sector as well to see how the situation over there could be compared with the same activities adopted by the private sector healthcare sector. In addition, future studies might use the existing model to assess the effects of value co-creating, switching cost, hospital image, patient engagement, and employee satisfaction as intervening or moderating variables.

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