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An Assessment of Service Quality in Private Health Care Sector in Sri Lanka

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This study identifies the quality determinants of the private healthcare delivery and the gap between expected and perceived service quality. It will also investigate the relationship between satisfaction and loyalty with customers' perception. Data gathered from 154 patients, 41 management representatives and 46 internal customers including 38 doctors and 08 nurses from 15 private hospitals located in Western Province using a questionnaire survey developed based on SERVQUAL model. Findings suggest that reliability dimensions were the most expected by patients though, assurance dimensions were the most perceived quality dimensions. There were significance gap between expectation and perception while responsive dimensions shown the highest representing lower quality of service while assurance and empathy dimensions have significant relationship with overall customer satisfaction. From the internal customers' point of view, assurance dimensions were the highest service quality gap. Moreover, management values responsiveness as the most expected dimension by indicating differences between patient, management and internal customers expected and perceived service quality. Therefore, hospital administration can use the current findings to develop health care service delivery strategies to enhance patient satisfaction and patient trust.

Keywords: SERVQUAL, Health care, Service quality, Hospital, Private sector

Introduction

Healthcare industry has become one of the fastest rising industries in the service economy due to reasons such as increasing aging population, competitive pressure and increase in purchasing power of patients with insurance facilities, technology and emergence of new treatments (Abramowitz, Cote and Berry, 1987). On the other hand, technological advancements and globalization has changed the health care provider's practices intensely, in the recent past. As a result, health care system has become a challenge for every government, state, political party and insurance agency due to high competition in this sector. This competition results in satisfying, acquiring and retaining patients through change in benefit quality measurements, building trust and getting positive notoriety (Rubin, 1990, Zsidisin, Jun, & Adams, 2000).

Service quality is one of the key factors in conserving competitive advantage to service sector including health care industry (Jabnoun and Rassai, 2005). Importantly, the customer in health care industry is in interaction with the enterprise during the whole production process. Therefore, customer concerns about the quality of product arose from the production as well as the other elements of the service pack that the customer interacts during the whole production period (Uyguc, 1998). As a result, quality health care is one of the main urgencies of most of the countries (Markovic, Loncaric, & Loncaric, 2014) including Sri Lanka.

Sri Lankan healthcare industry basically is

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considered as an essential welfare service and hence the government provides free service to the entire population (Perera, 2009). However, in the last few decades, the public healthcare system faced numerous challenges such as continuous statistic and epidemiological change, asset limitations, and government cutting of essential funding to enhance saving and efficiency. Moreover, there is a long wait for specialist care and more advanced procedures even though this system rapidly developed such that it has achieved a leading position among regional countries. In contrast, there have been many developments in healthcare industry around the world even though Sri Lankan public sector hasn't grown with those global trends. Many researches state that the low expenditures allocated to health care services from the government budget lead the Sri Lanka's public health care system not to reach up to global benchmarks (Dayarathne, 2013).

Moreover, the aging population and non-communicable diseases (NCD) increase the burden on Sri Lanka's health care while rising income increase the opportunity for private sector even though it is questionable whether Sri Lankan private healthcare industry players are addressing the opportunities well. Sri Lankan private health sector has shown significant growth in 1981 to 2000 with an expansion of services through hospitals laboratories and clinics. This sector provides both out-patient and in-patient curative care in urban and semi urban areas in Sri Lanka. Curative services yield higher profit margin and has a higher demand compare to preventive services which is mainly provided by the private sector in Sri Lanka.

Then again, the private division is for all intents and purposes subject to people in general area for its supply of HR. Similarly, late appearance of channelled consultants or even unannounced cancellations of appointments due to various reasons and patients waste their money and time in the private health care as well. This mainly happens due to these consultants have to travel from one hospital to another on city roads and in long traffic lines. Sometimes even though consultants meet their patients, consultants are exhausted with work in their busy schedules. Hence, they are not in a good mental state to treat or hear the patient. This has become a very unsatisfactory situation for those channelling patients in private health care (Dayarathne, 2013). Therefore, even though the private sector fills the vacuum made by public sector in Sri Lanka, it comes with the unaffordable cost (Dayarathne, 2013).

The Research Problem

Healthcare has become the fastest rising industry in Sri Lanka. Sri Lankan healthcare industry is considered as an essential welfare service hence, the government provides free healthcare service to the entire population. There have been many developments in healthcare industry around the world even though Sri Lankan public sector hasn't grown with those global trends; this was mainly due to the low expenditures allocated to healthcare services from the government budget. With an aging population and non-communicable diseases (NCD) increasing the burden on Sri Lanka's healthcare while rising income for many Sri Lankans increases the opportunity for the private healthcare sector even though it is questionable whether Sri Lankan private healthcare industry players are addressing the opportunities well and providing the expected healthcare services Sri Lankans deserve. Having said so, extreme cost, late appearance of channelled consultants or even unannounced cancellations are some of the problems that patients face in the private sector. This study addresses the major question related to whether the service offered is meeting patients' expectations or not.

Objectives of the research

Specifically, the research will cover the following objectives.

1. To identify the quality determinants of current health care delivery in Sri Lanka
2. To identify the gap between expected and perceived service of stakeholders'
3. To determine the relationship between service quality dimensions and overall customer satisfaction in private hospitals
4. To assess the impact of overall customer satisfaction on customer loyalty in the private hospital context

Scope and the Significance of the Study

Health care comprises hospitals, clinics, dispensaries, nursing homes, etc. Nonetheless, this study considered only hospitals when assessing the quality of private health care in Sri Lanka. Moreover, there are different models to test the

service quality, this study considered only SERVQUAL model when assessing Sri Lankan private health care service delivery.

Literature Review

Sri Lankan health care system has shown poor quality compare to most of the industrialized countries around the world. Explaining the reason behind that Jayasekara (2004) highlighted that the poor condition of foundation and gear, questionable supply and nature of medications, weaknesses in squander administration and disease control, poor execution of work force as a result of low inspiration or deficient specialized abilities and serious under financing of fundamental working expenses of wellbeing administrations. Moreover, frequent disruptions of health services due to labour disputes especially in public health care system also a factor which leads poor quality service (Central Bank Report, 2004). As a result of the problem of shortage of medicine, equipment and facilities in public health care, people, and communication are more towards of selecting private sector health care service in Sri Lanka. Main reasons behind that convenience, the solace of knowing the patient could choose the master of his or her decision, and progression with a similar specialist were likewise viewed as essential reasons. In addition, more noteworthy secrecy in private settings when contrasted with open offices was likewise distinguished as a critical factor (Govindaraj, Navaratne, Cavagnero, and Seshadri, 2014).

Govindaraj, Navaratne, Cavagnero, and Seshadri, (2014) stated that patients perceived better quality of care in the private sector compared to Sri Lankan government sector. Rishard & Kodithuwakku, (2008) investigated to what extent the government hospitals of Sri Lanka meet the expectation of its external and internal customers to achieve the major objective of assess the quality of services delivered by a selected government teaching hospital, as perceived by its customers. Moreover, Sritharan (2012) investigated important dimensions of service quality in the services offered by private hospitals in Sri Lanka and the factors that influence service quality in private hospitals. This investigation was limited to Jaffna Districts using 250 patients' responses. Modified SERVQUAL were used including communication dimension. The examination discoveries demonstrated that all components have positive connections and the relationship among factors unimportant. What's more, assist more Jaffna area private healing facilities' patients appraised the unwavering quality measurement the most imperative of all, trailed by physical assets, confirmation, compassion, responsiveness, while the correspondence measurement evaluated minimum critical of all.

As per the findings, general quality scores were preferred in people in general division over the private segment. Execution was comparative for administration of AMI and labor and fairly better in the private segment for administration of asthma. People in general area performed better in those markers that are not obliged by assets, but rather more awful in pointers that are very asset serious. Quality was practically identical in evaluation and examination, yet people in general division performed better in treatment and administration and medication recommending and humbly more regrettable as far as results. Therefore, findings concluded that quality in people in general division is superior to in the private segment in numerous regions, in spite of spending being generously less. Quality out in the open healing facilities is asset compelled, and needs more noteworthy government speculation for development, however when asset impediments are not basic, people in general segment seems ready to convey equivalent or preferable quality over the private division. General similitudes in quality between the two divisions recommend the significance of doctor preparing and different components.

Customer Expectation

Customer expectation is considered as wants or needs of clients about what they anticipate that a specialist co-op will offer them more than they are hoping to offer. As per the scholars, different outcomes were generated related to customer expectation and customer satisfaction. Supporting to the arguments Parasuraman et al. (1991) highlighted that if any firm can correctly understand the customer's expectation, they can deliver the service adequately. As highlighted by Rabin (2008) this expectation will be higher relevance to health care industry as patients build their expectation of their consultant or treatment from family or friends prior to their first visit. Oliver and De Sarbo (1988) provided a theoretical support to the effect of service expectation and customer satisfaction. As per the findings, expectation causes

an assimilation effect thus narrowing the gap while irregularity causes an inverse impact. At the point when patients perceive a hole, the last endeavor to decrease it. Be that as it may, if the disconfirmation is ensuing, the buyer may benefit from his negative observation coming about to the augmenting of the hole. Desires are not dictated by people themselves but rather impacted by reference gatherings, outer circumstances, standards, qualities, time and specialist co-ops which subject to change after some time because of accessible new advances, provider controlled variables like publicizing, valuing, new advances and administration development and in addition social patterns support by customer association and expanded access to data through the media and the web (Zeithaml. et al., 1993).

Customer Perception

Actual experience of the customer while consuming the service is identified as customer perception. As per the Lim and Tang (2000) when the customer expectation is higher than their perception, poor quality service will result. Mainly, every service provider is trying to maintain good relationship with their customers as higher quality will tend to increase customer loyalty (Gilbert et al 2004).

Health care Industry and Service Quality

Health care is the one of the most intangible services available as the consumer cannot sample it before purchasing and cannot evaluate it after consumption and hence the demand for a health care service cannot be predicted. The medical care provided varies from patient to patient, right from diagnosis to response to the treatment. There are many health professionals involved in treating a single ailment with a great variation of care. With highly involved risks, conceptualizing and measuring customer satisfaction and service quality more important and simultaneously more multifaceted in health care sector (Taner & Anthony, 2006).

Keeping the benefits of technological advances, there is a fundamental shift in health care consumerism or in other words patients are becoming more informed and involved in their own health care and more demanding (Padma, Rajendran, & Sai, 2009). Then, they look for newest and most advanced testing, medication and procedures available (Uphoff and Winn, 1999). Therefore, hospitals should focus on retaining every profitable customer with for zero defection (Reichheld and Sasser, 1990). Zero defection requires continuous effort of improve the delivery system of hospital service (Lim and Tang, 2000). In other words, health care providers should exceed the needs, expectations and standards of care of the patients, their families and other beneficiaries (Donabedian, 2001) and this can be changed the patient behavior such as loyalty and word-of-mouth (Andaleed, 2001). On the other hand, this process will allow health care providers to identify the activities that require improvement. Further, this results save time and money on resolving patient complaints (Pakdi & Harwood, 2005).

Service Quality and Behavioral Intentions in Health care Services

Some studies have linked between quality of health care delivery and patient satisfaction. Satisfaction is described as a "post consumption evaluation of perceived quality" (Anderson and Fornell, 1994). Supporting to the argument, Rust and Oliver (1994) suggested that quality is "one of the service dimension factored into the consumers' satisfaction judgment", similar to Parasuman who specifically highlighted that service quality is an antecedent of customer satisfaction (Brady et. al., 2002). Satisfying the stakeholders is very much important in health care industry as dissatisfied consumers of service seldom complain to provider (Gronhaug and Arndt, 1980, Quelch and Ash, 1981), nonetheless may look at alternative providers and engage in negative "word-of-mouth" with potential clients (Brown and Swartz, 1989). Finally, this will affect the success of the treatment plan and the financial performance of the organization. Reidenbach and Smallwood (1990) tested overall service quality perceptions of patients, their satisfaction and their willingness to recommend services to others and concluded that that's were strongly correlated to each other in different hospital settings, namely, in-patients, out-patients and emergency care patients. Nonetheless, Taylor and Baker (1994) examined a moderating effect of customer satisfaction and between service qualities.

Research Methodology

A logical way of arranging, executing, and talking about vital outcomes is fundamental for doing any examination, paying little mind to which fields are being researched, for example, administrative and social fields. Accordingly, this part characterizes the

examination outline, hypothetical system, populace tests, instrument, information gathering methodology and the strategies of information investigation for inspecting service quality of current health care delivery in Sri Lanka.

Research Design

The overall arrangement of linking the theoretical research problems to relevant and realistic empirical research is called research design (Ghauri & Gronhaug, 2005) or general plan that shows how the researcher answer the research question or problem (Saunders et al., 2007). This helps to make rational choice and prioritize the preferred method of collecting and analyzing research data. Cross-sectional and longitudinal are the two time horizon under research time horizon which is important as it has an impact on the process. Longitudinal study can be used when specific sample is repeating from more than two period of time (MacNabb, 2008) and cross sectional study or a social survey carries at a particular time (Saunders et al., 2009). This study based on quantifiable observation of human experience to assess the service quality of private health care and this lead to statistical analysis as explained under the principle of positivism. Therefore, this study was a cross sectional descriptive study and used survey strategy and generalization was done under the statistical probability. This study basically concerned the quantitative aspect as the main focus was the application of the SERVQUAL questionnaire to a sample of patients and service providers / administrators and internal customers (doctors, nurses) at the practice.

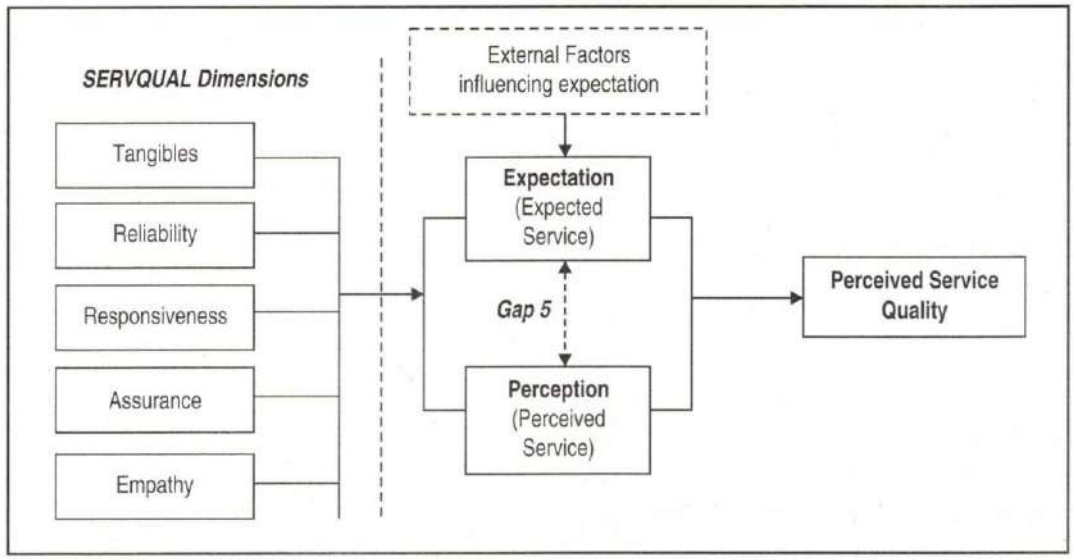
Research Conceptual Framework

A conceptual framework for health care service quality, based on the literature review and discussions presented in section 2. Service quality is "the delivery of excellent or superior service relative to customer expectations" (Zeithaml and Bitner, 1996). Measuring the expectation of customer has been guided by the SERVQUAL framework (Parasuraman et al., 1985, 1988). According to the SERVQUAL, there are five dimensions, named as tangibles, reliability, responsiveness, empathy and assurance, which is described under figure 1 and table 1 (Parasuraman et al., 1988).

In this examination, human services quality, as a multi-dimensional builds comprising of five measurements: effects, dependability, responsiveness, sympathy and affirmation. Further, with reference to the social insurance industry, substantial quality alludes to physical administration perspectives, for example, appearance of inside clients, hardware and offices, unwavering quality can distinguished as exact, trustworthy and predictable execution of the administration.

Responsiveness, compassion and confirmation speak to parts of collaboration quality. Provoke and willing to serve the client can be distinguished as responsiveness and minding and customized consideration alludes to compassion, fitness, cordiality and validity of staff which produces client trust and certainty can perceive as affirmation (Pollack, 2008).

Figure 1: Conceptual model



Source: Parasuraman et al., 1988

Research Hypotheses

Hypotheses are formulated to test the relationships among the factors mentioned. Based on the SERVQUAL model following hypothesis were developed,

Hypothesis 1:

H1a : There is no difference between perceptions and expectations of customers from quality of services provided in dimension of Tangibles.

H1b: There is no difference between perceptions and expectations of customers from quality of services provided in dimension of Reliability.

H1c: There is no difference between perceptions and expectations of customers from quality of services provided in dimension of Assurance.

H1d: There is no difference between perceptions and expectations of customers from quality of services provided in dimension of Empathy.

H1e: There is no difference between perceptions and expectations of customers from quality of services provided in dimension of Responsiveness.

Hypothesis 2:

H2: There is a mean difference of expected and perceived service quality among three different stakeholders.

Hypothesis 3:

H3: There is no significant relationship between perceived service quality dimensions and overall patient satisfaction of Sri Lankan private health care sector.

Hypothesis 4:

H4: There is no significant relationship between overall patient satisfaction and customer loyalty.

Research Tools, Data Collection Methods and Sample Selection

Population of this study was patients (Sri Lankans and foreigners) who were admitted in the private hospitals or those who had taken treatment from private hospitals, private hospital service providers and their internal customers based on Western province covering all three districts named Colombo, Gampaha and Kalutara. Survey was taken by selecting 15 private hospitals in Western Province names of the hospitals were in the annexes 1 and table 3:1 describes the sample selection process. For this study, private hospitals are defined as non-government establishments that routinely admit patients for an overnight stay. The reason behind the selecting Western province for this study was as per the Census and Statistics data, (2010) 28% of the total population of Sri Lanka represent this province and population density is 1590 persons/sqkm. Moreover, the capital of Sri Lanka, Sri Jayawardenapura and the commercial capital Colombo are located in Western Province. Investment promotion zones named as Katunayake, Biyagama, Seethawaka and Wathupitiwela comprise 100,000 of work force representing young females mostly are located in Western Province as well. As a result, these areas are more vulnerable to social and health problems. We selected 20 patients from 15 hospitals i.e. 300 questionnaires was distributed, 5 representatives of management for each of the 15 selected hospitals i.e. 75 questionnaires and 5 internal customers e.g. consultants, nurses and doctors from each of these 15 hospitals i.e. 75 questionnaires.

Both primary and secondary data was gathered for this study. Primary data is the source of information, which provides the original and more specific data in order to resolve the research problem (Saunders et al., 2009). Therefore, primary data was gathered through structured questionnaire survey developed in accordance with the SERVQUAL. Questionnaire survey was the best method to collect data about quality of health care as it was used by Dasanayaka, Gunasekara and Sardana (2012) gathered data about quality health care service delivery in public sector hospitals in Sri Lanka. Primary data were collected from patients, service providers and internal customers of the fifteen previously mentioned hospitals in August - November, 2015.

SERVQUAL model is one of the best methods to test service quality of health care sector. This model is tested by several scholars and concluded that this model is well fitted to analysis the health care sector (Youssef et al., 1996, Curry & Sinclair, 2002, Hussey and Hussey, 1997, Dasanayaka, Gunasekara and Sardana 2012, Sritharan, 2014). Moreover, service quality in the health care sector can be divided in to technical and functional quality (Gronroos, 1984, Parasuraman et al., 1985) where technical quality refers the diagnosis and procedures and functional quality implies the manner of delivering the services to the patients. Because most patients lack medical

expertise for evaluating the technical attributes and they are engage with the service delivery process more, this study mainly targeted functional aspect of service delivery which is a widely used measurement in health care sector (Buttle, 1996, Dursun and Cerci, 2004, Babakus & Boller, 1992, Carman, 1990, Cronin & Taylor, 1992). SERVQUAL, as an instrument for measuring service quality mainly focusing on the functional aspects of services (Gronroos, 2003 and Wong, 2004) and hence this study also used this instrument.

Data Analyzing Method

Quantitative techniques were used to analyze the data gathered. It is important to look at the data type that used in this study. When using quantitative analysis, data could be classified under two types mainly numerical or categorical. Numerical data can be defined as, whose values measured or counted numerically or when the measuring scales of data are numerical values, and then they are classified under quantitative variables. Categorical data is one whose values cannot be measured but can be classified into sets or when the measurement scale of data is a set of categories then they are classified under categorical variables to investigate the certain phenomena (Agresti & Finlay, 2009, p. 12-14).

This study is more related to categorical data, as these deals with SEQUVAL model of the service quality. Therefore, that is the reason numerical data can be excluded here and has to consider the categorical data in this study. Categorical data is further classified into nominal and ordinal data. In this study, data collected both nominal and ordinal data. Analysis of the study can be defined as the ability to break down data in components, clarify the nature of the component and the relationship between them (Saunders et al., 2009). To analyze data there are different methods for every research study, i.e. quantitative and qualitative data analysis procedures. A qualitative data analysis procedure allows developing a theory from collected data (Saunders et al., 2009); however, in a quantitative data analysis, data is already collected from the surveys enables to explore, present, describe and examine relationships and trends within the quantitative study (Saunders et al, 2009).

Similar data analysis tools were used by Al-Adham (2004) (t-test, one way ANOVA, multiple linear regression and correlation coefficient, Dave (2014) (Uni - Variate Analysisin form of frequency tables, Bi -Variate analysis using Cross - tabulation with Chi-Square test, Paired t-test, and ANOVA), Alrubaiee, & Alkaaida, (2011) (simple and multiple regression, ANOVA and T- test) and Markovic, Loncaric, Loncaric (2014) (explorative factor analysis, multiple regression analysis and correlation analysis. The final objective to suggest some measures for the policy makers in health care sector was performed by using secondary data sources based on the findings. Statistical Package for Social Science (SPSS), version 17 was used to analyze the data.

Data Analysis

Reliability Test

Cronbach Alpha score of expectation and perception of patients under five dimensions named as tangibility, reliability, responsiveness, assurance and empathy was listed in table 1. As per the findings, all five dimensions Cronbach Alpha scores were exceed 0.5 and 0.7.

Mean Expectation and Perception

Table 2 summarized expected (EX) and perceived (PE) mean scores for the each service attribute and

Table 1 Cronbach Alpha Scores

Multidimensional Items	Number Of Items	Cronbach's Alpha (EX)	Cronbach's Alpha (PE)
Tangibility	8	0.86	.872
Reliability	3	0.785	.796
Responsiveness	4	0.852	.858
Assurance	5	0.884	.905
Empathy	3	0.784	.839

Sources: Field Survey Data, 2015

means gap scores in term of each service attribute and expected and perceived mean scores and mean gap score for the each dimension. As per the findings of each statement highest mean score for the expectation recorded by statement 02, "Private hospitals should have cleanliness and hygiene at excellent level" (4.76) and lowest expected mean value was recorded by statement 05, "Private hospitals should provide visually appealing documentation" (3.95). Each statement highest mean score for the perception recorded by statement 03, "Doctors, Nurses and other staff were clean and well groomed" (4.01) and lowest perceived mean value was recorded by statement 10, "waiting time for admission and daily services was minimum at the hospital". Figure 2 has summarized mean of expected and perceived quality dimensions statement based.

Figure 2 Distribution of Mean: Based on the Statement

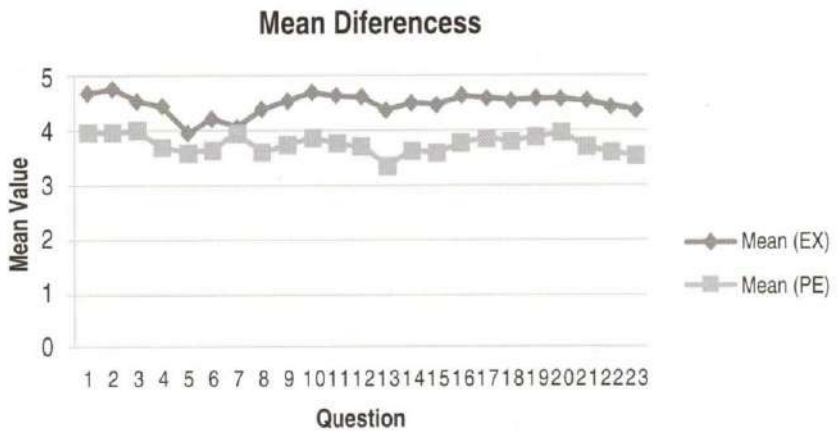


Table 2 Mean Gap Differences of Patients

Question	Mean (EX)	Mean (PE)	Mean Gap (PE- EX)		Mean (EX)	Mean (PE)	Mean Gap (PE- EX)
1	4.68	3.97	-0.71				
2	4.76	3.95	-0.81				
3	4.55	4.01	-0.54				
4	4.45	3.70	-0.75	Tangibility	4.38	3.80	-0.58
5	3.95	3.60	-0.35				
12	4.22	3.65	-0.57				
14	4.05	3.95	-0.1				
20	4.40	3.60	-0.8				
6	4.55	3.73	-0.82				
8	4.69	3.86	-0.83	Reliability	4.62	3.78	-0.84
9	4.63	3.76	-0.87				
7	4.61	3.71	-0.9				
10	4.38	3.34	-1.04	Responsiveness			
11	4.51	3.61	-0.9		4.50	3.56	-0.94
13	4.48	3.57	-0.91				
15	4.63	3.76	-0.87				
16	4.58	3.85	-0.73				
17	4.57	3.79	-0.78	Assurance			
18	4.59	3.86	-0.73		4.59	3.84	-0.75
19	4.58	3.95	-0.63				
21	4.55	3.70	-0.85				
22	4.44	3.60	-0.84	Empathy	4.45	3.61	-0.84
23	4.36	3.53	-0.83				

Sources: Field Survey Data, 2015

Quality Differences among Stakeholders

Pearson Chi-Square values summarized in table 3 below has shown greater than 0.05 (Asyp. Sig) hence null hypothesis (H2) was accepted and this indicates that there is no significant mean difference of expected and perceived service quality among patient, service providers and internal customers with 95% confident.

Overall Satisfaction and Loyalty

Overall satisfaction and loyalty were tested separately and summary statistics presented in table 4. As per the findings, the mean value of overall satisfaction was 3.7 which were near to 4. And mean value of loyalty in term of recommend this hospital to others was 3.76 which was also near to 4.

Overall satisfaction

Table 5 presented the frequency distribution of overall satisfaction of the selected hospital of patients. As per the findings, 60.4% of the respondents were agreed with the statement and interestingly, 20.8% were neutral about the statement. 10.4% were strongly agreed with the statement, 5.8% disagree and 2.6% strongly disagree with the statement.

Relationship between perception and overall satisfaction

To test the hypothesis developed in the methodology based on the literature, a multiple regression analysis was utilized for each of the measurements. The dependent variable for this investigation was the consumer loyalty thing and as independent factors were one of the measurements. Each five dimensions were calculated using difference number of statements, a mean was computed for each of the dimensions and this mean was used in each test.

Table 3 Chi-Square Test Results

Chi-Square Test Results						
	Value	Asymp. Sig (2 - sided)	Approx. Sig		Value	
			Phi	Cramer's V	Phi	Cramer's V
Patient & Provider (EX)	332.22	0.365	0.365	0.365	3.801	0.896
Patient & internal customers (EX)	329.66	0.402	0.402	0.402	3.786	0.892
Patient & internal customers (PE)	285.58	0.246	0.246	0.246	3.524	0.91

Table 4 Satisfaction and Loyalty

	Are you overall satisfied with health care services provided at the hospital?	Your wiliness to recommend this hospital to others?
N Valid	154	154
Missing	0	0
Mean	3.70	3.76
Std. Deviation	.833	.971
Variance	.695	.942

Sources: Field Survey Data, 2015

Table 5 Frequency Distribution of Overall Satisfaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	2.6	2.6	2.6
	Disagree	9	5.8	5.8	8.4
	Neutral	32	20.8	20.8	29.2
	Agree	93	60.4	60.4	89.6
	Strongly Agree	16	10.4	10.4	100.0
	Total	154	100.0	100.0	

Sources: Field Survey Data, 2015

Table 6 Model Summary: Perception and Overall Satisfaction

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	Df1	Df2	Sig. F Change	
1	.794[a]	.631	.618	.515	.631	50.604	5	148	.000	1.875

a. Predictors: (Constant), Empathy PE, Responsiveness PE, Tangibility PE, Assurance PE, Reliability PE

b. Dependent Variable: Are you overall satisfied with health care services provided at the hospital?

Table 6 showed the model summary of overall customer satisfaction and perception of patients. As per the findings, R value showed .794, which implied that correlation coefficient between the services perceived and overall customer satisfaction. R square value was 63.1% which implies that perceived service quality dimensions account for 63.1% of the variation in overall customer satisfaction. The adjusted R square was 61.8%. The difference between adjusted R square and R square was (.631-.618) = 0.013 or 1.3%. This implies that if the model were derived from the population rather than a sample it would account for approximately 1.3% less variance in the outcome. Durbin-Watson value was 1.875, which is close to 2 that the assumption has almost certainly been met.

Table 7 ANOVA Table: Perception & Satisfaction

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	67.044	5	13.409	50.604	.000[a]
	Residual	39.216	148	.265		
	Total	106.260	153			

An analysis of variance (ANOVA) table was summarized in table 7. F ratio was 50.604, which is highly significant ($p < .001$). Therefore, the final model significantly improves the ability to predict the outcome variable.

Customer loyalty

Table 8 presented the frequency distribution of customer loyalty of the selected hospital of patients. As per the findings, 52.6% of the respondents were agreed with the statement and interestingly, 18.8% were neutral about the statement while 18.8% were strongly agree with the statement. 5.2% were disagreeing with the statement and 4.5% strongly disagree with the statement.

Table 8 Frequency Distribution of Loyalty

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	4.5	4.5	4.5
	Disagree	8	5.2	5.2	9.7
	Neutral	29	18.8	18.8	28.6
	Agree	81	52.6	52.6	81.2
	Strongly Agree	29	18.8	18.8	100.0

Relationship between overall satisfaction and loyalty

To test the hypothesis developed in the methodology based on the literature, a multiple regression analysis was employed for each of the dimensions. The dependent variable for this analysis was the customer loyalty in term of whether they like to recommend the hospital to others and as independent variable was overall perceived value and the overall customer satisfaction.

Table 9 Model Summary: Satisfaction & Loyalty

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	Df1	Df2	Sig. F Change	
1	.761[a]	.579	.573	.634	.579	103.648	2	151	.000	1.608

a. Predictors: (Constant), Are you overall satisfied with health care services provided at the hospital?, Overall perception

b. Dependent Variable: Your wiliness to recommend this hospital to 4s?

Table 9 showed the model summary of overall customer satisfaction and loyalty of patients. As per the findings, R value showed .761, which implied that correlation coefficient between the overall customer satisfaction and loyalty. R square value was 57.9% which implies that overall customer satisfaction account for 57.9% of the variation in loyalty of the customers. The adjusted R square was 57.3%. The difference between adjusted R square and R square was (.579-.573) = 0.006 or .6%. This implies that if the model were derived from the population rather than a sample it would account for approximately .6% less variance in the outcome. As this study consider human perception which belongs to human behavior, according to the scholar R and R square value is enough do the study further. Durbin-Watson value was 1.608, which is close to 2 that the assumption has almost certainly been met.

Table 10 ANOVA Table: Satisfaction & Loyalty

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	83.377	2	41.688	103.648	.000[a]
	Residual	60.734	151	.402		
	Total	144.110	153			

An analysis of variance (ANOVA) table was summarized in table 10. F ratio was 103.648, which is highly significant ($p < .001$). Therefore, final model significantly improves the ability to predict the outcome variable.

Discussion

The aim of this study was to measure the service quality of Sri Lankan private health care industry. This study was targeted basically patient who take the service from private hospitals and other than that doctors or nurses who worked for private hospitals under internal customer category & administrative staff in private hospitals. Employees and administrative staff also represented the same private hospital selected by the patients.

The first research objective was to identify the quality determinants of current health care delivery in Sri Lanka. Before analyzing the data, reliability test was performed to test whether the dimensions employed to investigate the service quality offered by Sri Lankan private hospitals are reliable. Nunnally (1967) highlighted that if any Cronbach Alpha score was grater or equal to 0.5, then reliability is there. Moreover, Churchill (1979) recommended that Cronbach's coefficient alpha should be exceeding the minimum standard of 0.7 to accept the reliability. As per the findings of this study all the dimensions have exceed 0.5 and 0.7 minimum standard and hence all the dimensions employed in this study were reliable.

The second research objective was to identify the gap between expected and perceived service of stakeholders'. This was analyzed using mean gap variance and largest gap between which patients experience and expected was found in waiting time for admission and daily services. Moreover, hospital staff responds immediately when called by a patient, hospital staff's interest and willingness to help patient, hospital staff 's prompt service to patients and hospital keep patients records accurate and updated were the statements also showed a higher mean value gap representing lower quality of service.

As per the findings, the highest gap has scored by the internal customers were whether the hospitals ensured the patients privacy, provide visually appealing documentation, provide adequate information about hospital services, keep patients record accurate and up-to-date and hospital staff

has confidence & knowledge to answer patient's questions. Meanwhile, internal customers experience some positive gap score in hospital location, providing healthy foods, proving prompt service and patient confidence when they received the service. As per the findings, internal customers were recorded highest mean gap score in term of assurance and hence lower service quality nonetheless least gap score in empathy dimensions and hence higher service quality in term of empathy dimensions. Moreover, as per the chi-square results there was no mean difference of expected or perceived service quality among patients, internal customers and service providers. These findings of gap have achieved the third objective of this study.

The third research objective of this study was to determine the relationship between service quality dimensions and overall customer satisfaction in the case private hospital. Overall satisfaction of the patients was high as the highest numbers of patients represented that category agreed. Multiple regression results which showed that perceived service quality dimensions account for 63.1% of the variation in overall customer satisfaction. This is used to test whether there was any relationship between perceived service quality and customer satisfaction. As per the findings, assurance and empathy dimension have significant relationship with overall customer satisfaction and assurance dimension has the significant relationship on customer satisfaction than empathy. These findings confirmed the Jager & Plooy (2007) findings which highlighted those assurance variables contribute significantly to the overall satisfaction with the hospital even though it highlighted tangibility also contributed contrasted to this study findings. This confirmed the Reidenbach and Smallwood (1990) findings which identified a strongly correlated to each other in different hospital settings. Similarly, Ramez (2012) highlighted that the perceived service quality has a relationship with customer satisfaction. This satisfied the fourth research objective of this study.

The fourth research objective of the study was to assess the impact of the overall customer satisfaction on customer loyalty in the private hospital context. Similar to the patient's satisfaction, loyalty, and highest score had shown agreed followed by strongly agreed and neutral. By confirming the previous studies Choi et al. (2004), Lee et al. (2012), Reidenbach & Smallwood (1990), Ramez (2012) the relationship of patient satisfaction on customer loyalty is confirmed. It is reflected in the patients' intention to recommend the hospital to others. These findings fulfill the fifth objective of the study and final objective will discuss in the chapter six.

Conclusion and Future Work

This study was carried out to measure the service quality of Sri Lankan private health care delivery in term of the private hospital based on six research objectives. Quantitative study based on SERVQUAL method was carried out and information was gathered form patients, internal customers including doctors, nurses and administrative staff of selected 15 hospitals. Therefore, this study can be concluded that patients of private health care delivery in Sri Lanka value different quality dimensions even though management and internal customers think differently. Moreover, patients experienced the same dimensions in different ways than the other stakeholders. Nevertheless, patients are the key to the hospitals and hence retention and satisfaction of patient are important to every hospital.

A comparative report can be done with a bigger specimen measure so results can be summed up in a bigger populace. Further, recommendation incorporates utilizing diverse explanations things in the three measurements proposed in this investigation to test the dependability of the measurements. Moreover, evacuating and including another measurement could be a choice, to test if another angle applies on. Moreover, the scope of the study can be further expanding by studying the nursing homes, private medical centres, etc. Also, this can be further possible in term of service categories named as OPD service, channelling service, etc.

REFERENCES

Abramowitz, S., Coté, A. A., & Berry, E. (1987). Analyzing patient satisfaction: a multi analytical approach. QRB Qual Rev Bull, 13(4), 122-130.

Al-Adham, M.A.A.F. (2004). Assessment of perceived health care service quality at Palestinian Hospitals: A model for good hospital management practice. Master Thesis in public health, faculty of graduate studies at An-Najah National University, Nablus.

Alrubaiee, L. & Alkaaida, F. (2011). The mediating effect of patient satisfaction in the patients' perceptions of healthcare

quality – patient trust relationship. International Journal of Marketing Studies, 3(1).

Andaleeb, S. S. (2001). Service quality perceptions and patient satisfaction: A study of hospitals in a developing country. Social Science & Medicine, 52, 1359-1370.

Babakus E., & Mangold W. G. (1992). Adapting the SERVQUAL scale to hospital services: An empirical investigation. Health Serv. Res., 26(6), 767-86.

Berry, L. L., Parasuman, A., & Zeithaml, V. A. (1988). The service quality puzzle. Business Horizon, 31, 35-43.

Boulding, W., Kalra, A., Staelin, R., & Zeithaml, V. A. (1993). A dynamic process model of service quality: from expectations to behavioural intentions. Journal of Marketing Research, 30(1), 7-27.

Brady, M. K. & Cronin, J. J. (2001). Some new thoughts on conceptualizing perceived service quality: A hierarchical approach. Journal of Marketing, 65(3), 34-49.

Brown, Stephan, W. & Teresa, A. S. (1989). A gap analysis of professional service quality. Journal of Marketing, 53, 92-8.

Bryman, A., & Bell, E. (2007). Business research methods (2nd ed.). Oxford: Oxford University Press.

Butt, M. M., & De Run, C. E. (2010). Private health care quality: applying a SERVQUAL model. International Journal of Health care, 23(7), 658-673.

Buttle, F. (1996). SERVQUAL: Review, critique, research agenda. European Journal of Marketing, 30(1), 8-32.

Carman, J. (1990). Consumer perceptions of service quality: An assessment of the SERVQUAL dimensions. Journal of Retailing, 66(1), 33-55.

Central Bank. (2014, 2011). Annual Report, Central Bank of Sri Lanka.

Cronin, J.J., & Taylor, Jr. S. (1992). Measuring service quality: a re-examination and extension. Journal of Marketing, 56(3), 55-68.

Dasanayaka, S., Gunasekara, P., & Sardana, D. (2012). Quality of health care service delivery in public sector hospitals: a case study based on Western Province in Sri Lanka. World Review of Entrepreneurship, Management and sustainable development, 8(2), 148 - 164.

Dave, D. R., & Dave, R. (2014). A study on service quality and customer satisfaction of selected private hospitals of Vadodara City. Pacific Business Review International, 6.

Dayaratne, G. D (2013). Private hospital health care delivery in Sri Lanka: some issues on equity, fairness, and regulation. Working Paper Series, 18.

Devlin, S. I., & Dong, H. K. (1994). Service quality from customers' perspective. Marketing Research, 6(1), 5- 13.

Donabedian, A. (1966). Evaluating the quality of medical care. Milbank Mem Fund Q, 44, 166-206.

Dursun, Y., & Cerci, M. (2004). Perceived quality : A study on patient satisfaction and behavioral factors, Erciyes Universitesi Iktisadi ve Idari Bilimler Fakiltesi Dergisi, 23, 1- 16.

Gerring, J. (2001). Social science methodology: A criteria framework. Cambridge University Press.

Govindaraj, R., Navaratne, K., Cavagnero, E., & Seshadri, S. R. (2014). Health care in SRI LANKA: What can the private health sector offer?", Health, Nutrition, and Population (HNP) Discussion Paper.

Grönroos, C. (1984). A service quality model and its marketing implications. European Journal of Marketing, 18(4), 36-45.

Grönroos, C. (1990). Service management and marketing theory, managing the moments of truth in service competition. Lexington Books, Lexington, MA.

Grönroos, C. (2000). Service management and marketing: A customer relationship management approach. Wiley, New York, NY.

Grönroos, C. (2001). The perceived service quality concept–a mistake?. Managing Service Quality, 11(3), 150-152.

Hussey, J., & Hussey, R. (1997). Business research: a practical guide for undergraduate and postgraduate students. Basingstoke: Macmillan.

Jabnoun, N., & Rasasi, A. J. (2005). Transformational leadership and service quality in UAE hospitals. Managing Service Quality, 15(1), 70-81.

Jager, J., & Plooy, T. (2007). Measuring tangibility and assurance as determinants of service quality for public health care in South Africa. Acta Commercii, 96-116.

Jain, S. K. & Gupta, G. (2004). Measuring Service Quality: SERVQUAL vs. SERVPERF Scales. Vikalpa, 29(2), 25-37.

Karassavidou, E., Glaveli, N., & Papadopoulos, C. (2010). Helathcare quality in Greek NHS Hospitals: No one knows better than patients. Department of Economics, Aristotle University of Thessaloniki.

Kotler, P., & Keller, K. L. (2009). Marketing management (13th end). New Jersey: Pearson Education Inc, Upper Saddle River.

Ladhari, R. (2008), Alternative measures of service quality: a review, Managing Service Quality, 18(1), pp. 65-86.

Lim,P. C., & Tang, N. K. (2000). A study of patients' expectations and satisfaction in Singapore hospitals. International Journal of Health care Quality Assurance, 13(7), 290-299.

Markovic, S., Loncaric, D., & Loncaric, D. (2014). Service quality and customer satisfaction in the health care industry - towards health tourism market. Tourism and Hospitality Management. 155-170.

Oliver, R. L. (1993). A conceptual model of service quality and service satisfaction: Compatible goals, different concepts. Advances in Services Marketing and Management, 2, 65-85

Padma, P., Rajendran, C., & Sai, L. P. (2009). A conceptual framework of service quality in health care: Perspectives of Indian patients and their attendants. An International Journal, 157 - 191.

Pakdil, F., & Harwood, T.N. (2005). Patient satisfaction in a preoperative assessment clinic: an analysis using SERVQUAL dimensions", Total Quality Management and Business excellence, 16, 15–31.

Parasuraman, A. Zeithaml, V., & Berry, L.L. (1988). SERVQUAL: a multiple-item scale for measuring consumer perceptions of service quality. Journal of Retailing, 64, 12-40.

Parasuraman, A., Zeithaml, V. & Berry, L.L. (1985). A conceptual model of service quality and its implications for future research. Journal of Marketing, 49, 41-50.

Parasuraman, A., Zeithaml, V., & Berry, L.L. (1991). Refinement and reassessment of the SERVQUAL scale. Journal of Retailing, 67(4), 420-50.

Patel, R., & Tabelius, U. (1987). Grundbok i forskningsmetodik. Lund: Studentlitteratur.

Perera, I. (2009). Implementing health care information in rural

communities in Sri Lanka: a novel approach with mobile communication. Journal of Health Informatics in Developing Countries, 24-29.

Pollack, B. L. (2008). The nature of the service quality and satisfaction relationship. Managing Service Quality, 18(6), 537-558.

Poston, R., Reynolds, R., & Gillenson, M. (2007). Technology solutions for data accuracy and availability problems in health care records. Information Systems Management, 24(1), 59-71.

Ramez, W.S. (2012). Patient's perception of health care quality, satisfaction and behavioral intention: an empirical study in Bahrain. .International journal of business and social science, 18.

Reichheld, F. F., & Sasser, W. E. (1990). Zero defections: quality comes to services. Harvard Business Review, 68, 105-111.

Rubin, H. R. (1990). Can patients evaluate the quality of hospital care?. Med Care Rev, 47(3), 267-326.

Rust, R. T., & Oliver, R.L. (1994). Service quality insights and managerial implications from the frontier. Sage publications, London, 1-19.

Saunders, M., Lewis, P., & Thornhill, A. (2009). Research methods for business students (5th ed.), Harlow, Pearson Education.

Sewell, N. (1997). Continuous quality improvement in acute health care: creating a holistic and integrated approach. Journal of Health care Quality Assurance, 10 (1), 20-26.

Solomon, M.R. (2009). Consumer behavior, Buying, Having and Being (8th edition). Pearson education, inc.

Sritharan, V. (2014). Measuring service quality dimensions: an empirical study of private hospitals in Jaffna District, Sri Lanka. Journal of Marketing and Consumer Research, 3, 18-25.

Taner, T., & Anthony, J. (2006). Comparing public and private hospital care service quality in Turkey: Leadership in Health Service. Leadership in Health Service, 19.

Uphoff, B., & Winn, J. (1999). The health care profit pool: who stands to gain and lose in the digital economy?. Health Forum Journal, 48-52.

Uyguc, N. (1998). Quality management in health care: A Strategic Approach (1 ed). Dokuz Eylul Publishing, Izmir.

Youssef F. N., Nel D., & Bovaird T. (1996). A health care quality in NHS hospitals. International Journal of Health care Quality Assurance, 9(1), 15-28.

Zeithaml, V. A., Berry, L.L., & Parasuman, A. (1996). The behavioral consequences of service quality. Journal of Marketing, 60(2), 31-46.

Zeithaml, V. A., Parasuraman, A., & Berry, L. L. (1990). Delivering Quality Service; Balancing Customer perceptions and Expectations. The Free Press, New York.

Zineldin M. (2006). The quality of health care and patient satisfaction: An exploratory investigation of the 5Qs model at some Egyptian and Jordanian medical clinics. International Journal of Health care Quaity. Assuance, 19(1), 60–92.