An Assessment the Healthcare Service Quality in Selected Base Hospitals in RDHS Division Kalmunai-Sri Lanka

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Abstract

A cross sectional study was conducted to assess the service quality in Out Patients Department of selected base hospital in Sri lanka.Using the modified SERVQUAL questionnaire, data were derived from 303 patients. The result provide the level of service quality and the perception of quality dimension by the OPD patients. The results also confirm the majority of the participants are female (54.8%).Service quality is in moderate level in all the selected hospitals. According to the study domine "Reliability " is highly correlated with {Mean; 5.5861) service quality and patients perceived law level of "Courtesy" (Mean;3.6583) in the hospitals. Monthly income of the patients influences the perception of quality. High income patients have a higher correlation with domine "Assurance'' (p=0.3.6; Sig-0.002) and the low income patients feel more domine "Responsibility '(p=0.208;Sig-0.002). Training programmes for employees on motivation, attitudinal changes and effective communication and developing a rewarding and awarding system in the hospital will strengthen the dimension of service quality and will improve patients satisfaction.

Keywords: Hospital service quality; quality dimension; out patients department.

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1. Introduction

Sri Lanka is an island having the population of 20,359,439 and located to the south of the Indian subcontinent in the Indian Ocean [1]Sri Lanka's social indicators are unique in South-East Asia. It is a low income country with an average per capita income of ª$US4065.2 and it provides free health facilities, free education, strong gender equality, and the opportunity for social mobility . The country is marching forward to achieve better health towards the 13 targets under the Sustainable Development Goal #3 in which the quality of health service has been given much prominence[2].The importance of measurement, evaluation and monitoring of service quality in the health sector, has gradually understood and recognized patient's importance and their perception on health care .Quality demines such as service quality, satisfaction and safety are assessed by conducting necessary survey in perceptive of patient's viewpoints [3].Sri Lanka provides healthcare to all its citizens free of charge irrespective of their status, income or geographic location. However, certain drawbacks in the hospital based healthcare delivery system affect the quality and efficiency of the services as evident from overcrowding in the higher level institutions, deficiencies of amenities and patient dissatisfaction[4]. Nowadays, quality is becoming a burden to organizations.In order to satisfy their customers they need to adopt various strategies. Quality of services is an important factor for the growth, success and persistence of an organization and is becoming significant for forecasting the organizations' perspective [5].Quality is a familiar term that is used in many settings. ''compatibility between the service and what the customer needs and expects'' is the most common definition [6].The quality of health services has two dimensions; technical quality and functional quality [7].The technical quality of health care services is on the bases of the authenticity of identification and management procedures. On the other hand, functional quality is related to non-clinical aspects. It is essential to evaluate the explicitly and implicitly of the services based on consumer's viewpoints" [8].

1.1 Model Servqual

There are different methods for determining the healthcare service quality and expectations of patients. SERVQUAL is one of the best and most used models in this regard . SERVQUAL model presents the dimensions of perceived service quality. Initially these dimension were reliability, responsiveness, customization, competence, access, courtesy, security, tangibles, communication and understanding/knowing the consumer. Later these dimensions were reduced to five dimensions that is responsiveness, assurance, empathy, tangibles and reliability[9]. SERVQUAL assesses the exact insight of the patients from the services they receive and compares it with their ideal expectation. Parasurman believes that the quality of services is related to their expectations before and during purchasing and its perceived quality after purchasing. He also defines service gap as the difference between customer expectation and their perceptions. This model is also recognized as the gap analyzer model and is the strongest tool in assessing the quality of services [10;11].

1.2 Dimensions of Service Quality

After extensive research, Zeithaml, Parasuraman and Berry found five dimensions customers use when evaluating service quality [9]. The five SERVQUAL dimensions are as follows;

- **Tangibles**: Appearance of physical facilities, equipment, personnel and communication.

- **Reliability:** It promises delivery, service provision, problem resolving and cost.

- **Responsiveness:** It emphasizes attentiveness and promptness in dealing with customers' requests, questions, complaints and problems.

- **Assurance:** It is defined as employee's knowledge of the firm and its employee's capacity to inspire trust and confidence in the customer.

- **Empathy**: Empathy is conveying through personalized services.

1.3 Patients' Satisfaction

A number of studies report that Patient's satisfaction is influenced by a many of factors and accordingly the following factors play a critical role in the satisfaction of patients; the attitudes of employees toward patients, the capacity to deliver prompt service without wasting time, ability to disseminate information to patients and the availability of up-to-date equipment. Others include the hospital's ability to render 24 hour service, the patience of the doctor to clearly explain what was wrong with patients before giving treatment, providing patients with detail information about their medication, and attractiveness and cleanliness of the hospital [12]. Parasuraman and co researchers explained about satisfaction in relation to service quality. They argued that service quality is defined as the gap between predicted or expected service (customer expectations) and perceived service (customer perceptions)[10].Service quality manifest when expectations are met (or exceeded) resulting in satisfaction, and a service gap occurs if expectations are not met also producing dissatisfaction(Figure 1)[10].
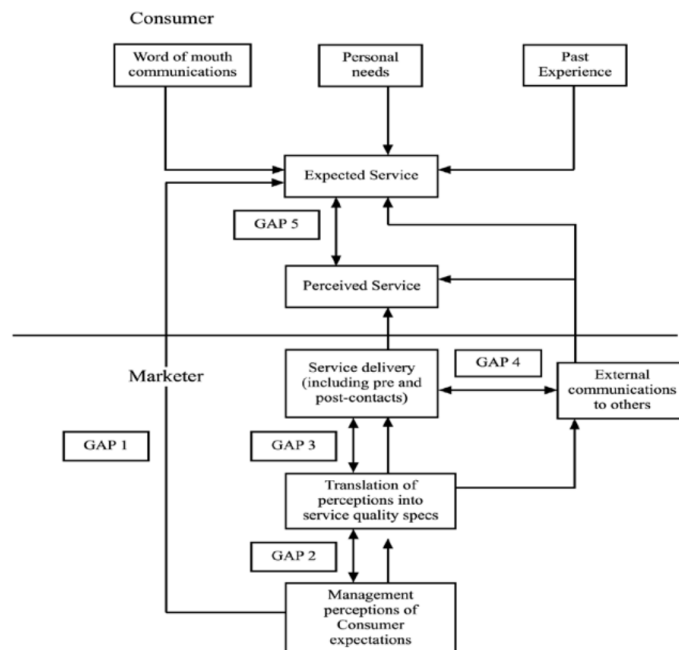

Figure 1: A Conceptual model of service quality Source: [10]

The objective of this study is to assess the current healthcare service quality (SQ) in the Base Hospitals in Kalmunai ,Sri lanka from the perspectives of the patients treated at Out Patient department(OPD) and this study

will helps to understanding hospitals position and probable service gaps. In addition, the identification of the main factors will support the right references for planning and resources allocation.

2. Materials and Methods

2.1 Sampling and data collection

This was a hospital based cross-sectional descriptive study. Study population consists of all the adult patients attending OPD in selected Base Hospital . Patients with psychiatric illness and those who need emergency treatment were excluded. Selection of patients was by systematic random sampling method in the OPD during the data collection periods .The number of questionnaire distributed were 350 and 303 patients responded. Non response rate was 13.42%.

2.2 Study Instruments

Questionnaire survey and Focus Group Discussions (FGD) were used as study instrument. A modified SERVQUAL questionnaire was adapted for the study. The instrument has been validated for use in the health sector .Developed questionnaire consists of 05 variable with 36 indicators under 05 concepts and one out come variable with 10 indicators. . Five point Linkert scale also was changed to six points to avoid central tendency .Scale of agreement was strongly agreed to strongly disagree and scale of frequency was never to always. Two focus group discussions were carried out at two hospitals to make above modification in questionnaire to suit Sri Lankan context. There were two components in the questionnaire. Part 'A' component was on socio demographic characteristics such as age, gender, marital stage, educational level and income. Part 'B' component was on the factors related to perception of service quality. This part consisted of five sub dimension of five variables such as tangibility ,responsibility , reliability ,assurance and courtesy and a section to assess overall service quality. Operationalization was done with 36 questions and 06 responses (Table.1).Pre-Testing was done at a Base Hospital in Sri Lanka. Self-administered questionnaire were filled by the participants and confidentiality of the information obtained was assured. Data Analysis-Five percent of the questionnaires were re-entered and cross checked to test the reliability of the questionnaire. Cronbach's α coefficient was calculated by using SPSS version 21to find out reliability of the questionnaire (Internal consistency) and Cronbach's α coefficient was 0.701; hence questionnaire was considered as reliable. SPSS version 21statistical software was used to perform statistical analysis on the survey data. Descriptive statistic for the socio demographic data of the respondents and survey items of modified SERVQUAL was analyzed. Basic measurement such as Mean and Slandered Deviation were calculated .Pearson Correlation analysis was conducted to test statistical relationship between each of independents variables and dependents variable .One way ANOVA was used for the mean difference in each 06 dimensions positive response scores among the selected hospitals .

Table 1: Operational definition of variables [10]

Variables	Definition
Dependent variable	
Service quality	Provision of care that exceeds patient expectations and achieves the highest possible clinical outcomes with the resources available [13].
Independent variable	
Tangibles	physical facilities, equipment and appearance of personnel
Reliability	ability to perform promised service dependably and accurately
Responsiveness	willingness to help consumers and provide prompt service[14]
Assurance	Knowledge of the employees and their ability to inspire trust and confidence
Courtesy	Respecting and caring, individualized attention provided to customers
Control variable	Socio demographic factors such as gender, age, civil status, education, occupation and income

3. Result

This study was carried out to assess the service quality of selected Base Hospitals in Sri Lanka. Five dimension of quality and five socio demographic factors were studied. Methodological aspects of the study indicate that three Hospitals were selected by random sampling technique. Out patients department is the main focus of these hospitals an average of 350 to 400 patients get treatment daily. There were 350 OPD patients were selected as study sample. Questionnaires were distributed among350 patients who satisfied inclusion criteria .A total of 303 patients responded to the questionnaire giving a response rate of 86.58 % . Cronbach's alpha coefficient was 0.701 for the whole questionnaire with 36 questions. It has been indicated that 0.7 or more to be an acceptable reliability coefficient [15]. Accordingly, all the variables were of satisfactory level of reliability coefficient. Initially, the descriptive analysis was carried out to identify the socio-demographic characteristics of the sample.

3.1 Socio- demographic profile of the respondents

Majority of the respondent were female (54.8 %) .In these areas most of the females are unemployed and able visit the hospital during the OPD time period between 8am to 4 pm. Majority of respondents belonged to age group of 16-32 years (36.3%) This fact should be investigated fully as there may be a disease out break which commonly affect this age group. In this study majority of the patients are non educated or having only primary education (54.8 %).Most of the patients who visit the OPD of these hospitals are village people who are poorly educated. Further educated crowd is usually employed and they are engaged during OPD hour with their

occupation. Majority of the patients were unemployed (50.2%).This was due to most of them are females and they were free during the time in which OPD functions. Further 27.7% of the patients are self employed and they can adjust their time to come to the OPD for treatment. Majority of respondents (60.7 %) had no monthly income .Next to it 21.5% of the patients had income of <10000/- (SLR) per month. This may indicate people with poor income go to the government hospital to get treatment free of charge.

3.2 Description of the variable- Overall Hospital service quality (Table4.9)

Table 4.9: Description of the Perception of Overall service quality in the Hospitals

No	Sub dimension of Variables	Mean	SD
01	I am willing to recommend this hospital to others who seek my advice .	5.52	0.77
02	I will encourage my friends and my relatives to go to this hospital	5.49	0.841
03	If I need medical treatment in future ,I will consider this hospital as my first choice.	5.66	0.734
04	If I feel sick in future I don't come to this hospital	1.29	0.72
05	I will make complain to others if I experience problem with the service at this hospital.	5.46	0.948
06	I think that I did the correct thing when I get the treatment from this hospital.	5.46	0.852
07	My choice to select this hospital for my treatment is wise one.	5.47	0.806
08	I am very satisfied with my decision to get treatment from this hospital.	5.48	0.797
09	The overall feeling about the health care services in this hospital is better than I expected.	5.44	0.843
10	This hospital did not satisfied my need	1.65	1.13

Source: Survey data

Most of them have felt that they would consider this hospital as their first choice and (mean 5.66) and would recommend this hospitals to others(mean 5.52).Considerable number of OPD patients were having the awareness that if they experience any problem in the hospital they can make complain about it.(mean5.44).In all the hospital facilities had been made available to make complain or giving suggestion **Tangibility**; Greater part of the OPD patients perceived that their privacy is respected by the staff(mean 5.79) It was a common feature observe in many hospital in this country .Hospital staff are neat in appearance. Uniform allowances are given

by the government and also part of the urbanization staff tends to make their appearance clean and neat. **Responsibility;** Majority of the OPD patients perceived that their problems are solved effectively by the staff (mean. 5.5) Most of the hospitals are conducting employee motivation and attitudinal changing education programme which are supported by ministry of health ,Sri Lank.These programmes had helped a lot to the managers of the hospital to promote a quality culture in their hospitals.

Reliability ;This study also observed patients can rely the staff as they noticed the practice that dispenser confirm the identity before issuing the drugs (mean.5.69) and also dispenser check the drugs before issued and the instruction given how to use it (mean .5.65).

Assurance; Currently more than 80% of the government hospitals are implementing quality improvement programme in their hospitals. The indicator "doctors examine and investigating my diseases before prescribe a treatment and I believe the treatment will cure my diseases(mean.5.58).

Courtesy ;All the indicators of this dimension show high mean values.

3.3 Perception of overall Hospital service quality

The total mean score of Overall perception the dependent variable of S Q was 4.68±0.49 in a six point range (3.5 is the midpoint). This result indicated that OPD patients perceived that Hospital service quality in the selected hospital was reasonably good.

3.4 Perception of Hospital service quality and Socio-Demographic Factors

There is no difference in the experience of SQ among the OPD patients belong to categories of age ,gender , marital stages and educational level except the income of patients.

Table 4.26: income of the patients and Perception of Service quality

Income of the patients	Frequency	Mean	SD
$\leq$ 10000 (SLR)	205	4.682	0.4333
>10000 (SLR)	98	4.521	0.4342
Total	**303**	4.574	0.4398

Source: Survey data

The mean(4.682) of those who have $\leq$ 10000 (SLR) income per month on perception of S Q was higher than the mean (4.521) of those who have >10000(SLR) of income .To verify relationship between perception of S Q and the income of patients, ANOVA test was used .F value was 9.687 and p value was 0.002. Therefore perception of S Q varied with income of the patients. Low income patients are satisfied with the quality of the service than the patients with more income. Out of the five independent variables, low income patients perceived more

Courtesy followed by the Reliability. Mean values were high for courtesy and assurance for patients with income of > 10000 (SLR). The Correlation and probable significance values for perception S Q of the patients of income ≤ 10000(SLR) had significance values for variables Responsibility (P=0.002) and assurance (p=0.012) were lesser than 0.05. This fact indicated the correlation between them were significant. The responsibility had a negative correlation. Except Assurance all other cultures were not correlated significantly with perception of S Q of patients with income > 10000(SLR) (p=0.002).

3.5 *Perception of Hospital service quality and dependent variables*

Table 4.18: Mean and Standard Deviation of Variables

Variables	Mean	SD
S Q perception in Base Hospitals *(Dependent)*	4.6869	0.49614
Tangibility	5.3694	1.01978
Responsibility	4.6982	0.59598
Reliability	5.5861	0.67501
Assurance	5.5373	0.75531
Courtesy	3.6583	0.48407

Source: Survey data

Overall in this study, Tangibility had a mean value of 5.36±1.01 (Table4.18,4.19). Its correlation with the overall perception of S Q was 0.498 and it was statistically significant (0.000). This indicates that the availability of physical facilities and equipment in working condition are available in all the base hospital and theses equipment are used for the patients in the process of treatment. Responsibility had a mean of 4.69±0.59. Its correlation with the Perception of S Q was weak (cc=0.679;p=0.00) and it was statistically significant (Tables 4.18,4.19). This indicated that though these three selected BHs had a significant level of responsibility ,providing the promised service essential for a positive S Q.

Table 4.19: Correlation Coefficient of variables in Selected Base Hospitals

Variables	Pearson Correlation S Q perception	Sig. (1–tailed) S Q perception
Tangibility	.498	0.000
Responsibility	.679	0.000
Reliability	.614	0.000
Assurance	.585	0.000
Courtesy	.167	0.002

Source: Survey data

Reliability had a mean of 5.58±0.67 and Its correlation with the perception of S Q is negative (cc= 0.614) and it is statistically significant as p=0.000(Table 4.18,4.19).Reliability in healthcare quality service plays a crucial role, the participants generally value the Reliability. Assurance had the mean (5.53±0.75) and its correlation value with the overall Perception of S Q was 0.585 and it was statistically significant (Table 4.19). Several studies showed that Assurance is important for a positive S Q. A previous study conducted in 2009 in Riyadh Hospitals , identified assurance as the most positive aspect of patient safety and this variable scored 72% (El-Jardali,2011). Courtesy had a mean value of 3.658±0.484 and its correlation with the perception of S Q was 0.167 which was statistically significant (Table 4.18,4.19). When compared with the other independent variables, Courtesy had the lowest mean and correlation with the perception of S Q. This itself indicates the existence of poor positive attitude among health staff.

3.6   Conceptual Framework of Perception of Hospital service quality in Selected Base Hospital After the Study

Of socio demographic factors taken for analysis , income of the patients had statistically significant difference. Out of five independent variables all had a significant correlation. Correlation between the independent variables and the dependent variable were weak ..Figure 5.1 shows the refined conceptual framework of the study.
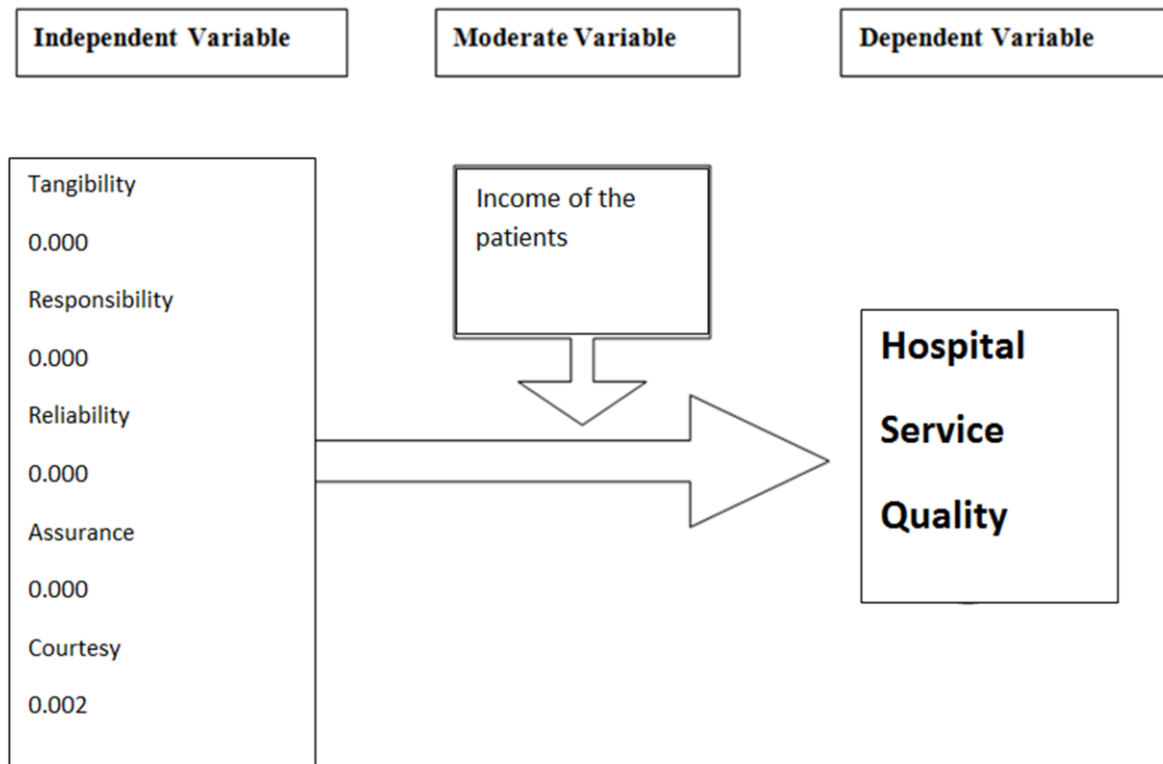

Figure 7: Refined Conceptual frame work of perception of Hospital service quality in the Hospitals

*Correlation Coefficient between Independent variable and dependent variable

3.7   Limitations

1.   The study was carried out only among OPD patients. The variability associated with other categories of patients such as inward was not seen in this study. Therefore, generalization of the findings of this study may not be possible.

2.   Close ended questionnaire was used in this study; hence it might restrict the real perception of the respondent.

4. Conclusions

The study finds out that the perception of Hospital service quality is moderate and same among all selected Base Hospitals . Anyhow there are significant differences found in the income of the patients wise. According to the study, courtesy and responsibility are less perceived by the respondents. Study further indicates that overall in the study responsibility and reliability have high correlation with Hospital service quality. It is noteworthy to observe that assurance has the lowest correlation with the Hospital service quality. Female perceived service quality more than male. Elderly population perceived service quality more than other age group patients.When the marital stage is considered widowed patients perceived more quality than other category.The patients whose education is primary and less perceived more service quality.The monthly income also influence the Hospital service quality. For those who are with of >10000 (SLR) income have a higher correlation with the assurance and those who have income of < 10000(SLR) have higher correlation with the responsibility .

5. Recommendations from the Study

1.   This study indicates that the moderate amount of quality service is provided by all three hospitals. Assurance is very much low when compare with other variables. Assurance can be improved through a well organized education system. Religious activity system should be encouraged. Advocacy and motivation of staff and placing a simple survey system to monitor the staff will create a good culture in the Hospital.

2.   Another drawback in all three Hospitals is poor responsibility of the staff. Repeated education should be encouraged and attitudinal changes should be bring out.

3.   There should be a proper communication and feedback method. Communication gap among employees, between leadership and subordinates and patients need to be addressed and rectified.

4.   Though there is a strong perception of tangibility among the patients, individual perception between categories differs. Management has to look into the formation of reliable contingency plan in proactive manner. The total score for the tangibility is greater than the average ,but some of the indicators are low. Physical facilities are required to improve , practices of Japanes 5 "S" and its importance &benefits and safety procedures. Management makes an initiative to arrange lectures, providing learning material and setting up of model unit with safety component. These activities will improve the quality of service at active ends.

5.   Awarding and rewarding system for the employees who contribute to the system development.

6.   Hospital service quality is a multidimensional phenomenon and further research should be encouraged

to study the excluded variables that affect Hospital service quality in government hospitals of Sri Lanka.

Strengthening all the domains of service quality will give raise to a better satisfactory service in the hospitals where the employees willingly participate in Total Quality Improvement.

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