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Impact of Cost Reduction Strategies on Service Quality of a Single Cataract Surgery in a Specialty Hospital

Dr. R. Anitha,

Alumnus,
Faculty of Management Sciences,
Sri Ramachandra Institute of Higher Education and Research (Deemed to be University), Porur, Chennai, India.

Dr. G. Jabarethina,

Assistant Professor,
Faculty of Management Sciences,
Sri Ramachandra Institute of Higher Education and Research (Deemed to be University), Porur, Chennai, India.

ABSTRACT

Cost is a fiscal assessment of utilities, goods, time, performance, risks incurred, resources and opportunities relinquished in production and delivery of goods or services. Cost reduction is the process used by any organization to reduce costs & increase profits. Cost reduction strategies can reduce operations cost while increasing productivity, allowing strategic reallocation of resources. Ever increasing cost of healthcare delivery makes it unaffordable to those at the bottom level. Therefore researcher made an attempt to identify the impact of cost reduction strategies on service quality of a cataract surgery in a specialty hospital and its branches. The objective of this study is to evaluate and measure patient & employees view on impact of price reduction strategies with respect to service quality. Service quality dimensions included in this study are reliability, assurance, tangibility empathy and responsiveness. Research Design considered to be used for this study is a Descriptive type. Employees (paramedics & administrators) and patients are chosen as sample. Tools such as anova, weighted average, chi-Square, regression were used. The major finding of the study was that the cost reduction strategies have no impact on patient flow of performance outcome but have an impact on service quality. If at all a patient opts for another hospital for treatment that may be due to service quality and not because of price of treatment.

Keywords: Service quality, Cost reduction strategies, Healthcare industry, Cost.

INTRODUCTION:

Cost is usually a fiscal assessment of utilities, goods, time, performance, risks incurred, resources and opportunities relinquished in production and delivery of a goods or a service. Depending on an organization's services and products, the strategies may vary with respect to Cost. Cost reduction is the process used by any organization to reduce their costs and increase their profits. Cost reduction is not concerned with setting targets and fixing standards. Cost reduction is the final result in the cost control process. It is a continuous, dynamic and innovative process which always looks for measures and alternative to reduce costs.

COST REDUCTION STRATEGIES:

Cost reduction strategies can reduce operations cost while increasing productivity, allowing for strategic reallocation of resources. With reduced cost the organization can refocus budgeted resources on expanding operations or new market expansion. Some of the cost reduction strategies are Supplier consolidation, Low cost country sourcing, Digitalization, Cash management, Overhead reduction.

STATEMENT OF THE PROBLEM:

Cost is the most important factor in developing healthcare delivery, ever increasing cost of healthcare delivery makes it unaffordable to the bottom level people and families. Hence in order to make it affordable to all a study has been conducted to identify the Impact of cost reduction strategies on service quality of a single cataract surgery in a specialty hospital and its multi-located branches in Chennai.

NEED OF THE STUDY:

Cost reduction is the process used by any organization to reduce costs & increase profits. Cost reduction strategies can reduce operations cost while increasing productivity, allowing strategic reallocation of resources. Ever increasing cost of healthcare delivery makes it unaffordable to those at the bottom level. Therefore researcher made an attempt to identify the impact of cost reduction strategies on service quality of a cataract surgery in a specialty hospital and its branches.

OBJECTIVES OF THE STUDY:

Primary Objective:
To evaluate the impact of cost reduction strategies on service quality of a cataract surgery.

Secondary Objectives:

- To measure the employees view on impact of cost reduction strategies on service quality.
- To analyze the customer/patient's view on impact of price reduction strategies with respect to service quality.
- To examine the impact of price reduction on choice of lens and patient flow.

RESEARCH METHODOLOGY:

The research was carried out based on single cataract surgery in a specialty hospital and its multi-located branches, Chennai. Research design dictates sequence of action to be carried out in par with a framed research work. The Research Design considered to be used for this study is a Descriptive type. Descriptive research is a one in which the researcher have no control over variable. Moreover descriptive research may be characterized as simply the attempt to determine, describe or identify what is. Since the researcher is going to describe the impact of cost reduction strategies on service quality of a cataract surgery, this type of study is chosen. Primary data was collected from patients and employees through a self-structured questionnaire which contains two separate set of questions for patients and employees. Patient questionnaire has 11 questions related to cost and the opinion on service quality dimensions. Employee questionnaire has 8 questions related to cost. The study was carried out for 3months (From February 2017 to April 2017).
Probability sampling technique was used in which simple stratified random sampling technique is followed. Organizational personnel were included in the study as they are the sources of information and patients are given questionnaire to gather their opinion on cost and service quality. Other security and housekeeping personnel were not included in the study.
The scales used in questionnaire were 5 point Likert scale namely Strongly agree (5), Agree (4), Neutral (3), Disagree (2), Strongly disagree (1), 3 point Likert scale namely Fully aware (3) Partially aware (2) Unaware (1) and dichotomous questions of Yes (1) or No (2). Pilot study is a preliminary study conducted in order to evaluate feasibility, in a small scale to predict a sample size and improve the study design prior to a research project. Internal consistency is measured by using Cronbach's alpha which shows the closeness of related items in a set of a group. It gives the result of scale reliability. The researcher conducted a Cronbach's alpha test with 30 samples in order to test the reliability of the tool. The result obtained is 0.73 which is more than the standard value. Hence the result of Cronbach's alpha reliability statistics shows that the data were reliable**.**

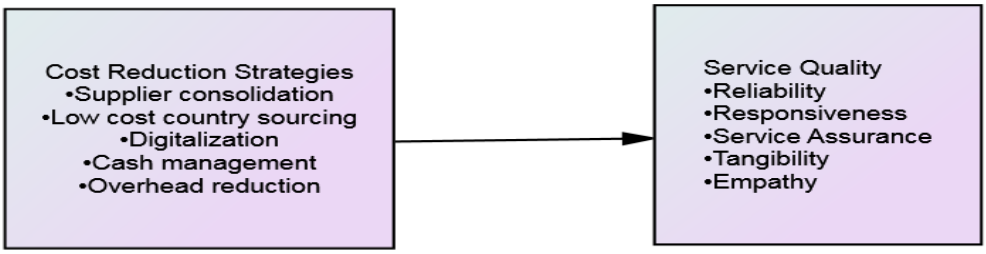
LIMITATIONS OF THE STUDY:

- The study is conducted only with 140 samples due to time constraints and also due to limited availability of time; data were collected only from three branches of a single specialty hospital.
- Due to non-availability of financial information for confidential reasons, the researcher was unable to do secondary data financial Analysis.
- The findings of the study are based on the opinion of the available Patients and Employees.

REVIEW OF LITERATURE:

Angelova, B. (2011) attempted to Measure Customer Satisfaction with Service Quality Using American Customer Satisfaction Model in the Macedonian mobile telecommunication industry. Service quality and customer satisfaction are very important to remain competitive and grow and have a positive effect on an organization's profitability. Satisfied customers form the foundation of any successful business as customer satisfaction leads to repeat purchase, brand loyalty, and positive word of mouth. From the analysis carried out, it was found out that the overall service quality perceived by the customers was not satisfactory, that expectations were higher than perceptions. Customers were not satisfied with service. The results and findings will provide extra information concerning customer's needs, wants and their satisfaction. Sanjuq, G. (2014) aimed to evaluate what impact service quality that underlies the SERVQUAL model has on customer satisfaction in Saudi Arabia's banking sector with self-administered questionnaire that was based on a convenience method to 412 customers of various bank in the Saudi capital city of Riyadh. The results show that, in the retail banking sector, the servqual model remains an effective way of measuring customer satisfaction. Because customer value is an asset to organizations, organizations must ensure that they provide the right products and services, supported by the right promotion, at the right time for their customers. Molaee, M., Ansari, R., & Teimuori, H. (2013) examined the effects of service quality dimension on customer satisfaction and loyalty in the Banking Industry of Iran. The population of this study is customers of selected branches of bank Mellat in Iran and the sample size is 150 and the data is collected through questionnaire. CARTER model is a conceptual model used in this study. The results of this study indicate that the dimension of responsiveness has the greatest impact on customer satisfaction and loyalty. Reliability and empathy didn't have significant impact on customer satisfaction. The direct impact of four of the six dimensions of service quality i.e. compliance, reliability, responsiveness, Tangibility on customer satisfaction is significant and the most effective dimension is responsiveness with 0.37 and the least effective dimension is compliance with 0.14. Data analysis indicated that customer satisfaction has positive and significant impact on customers' loyalty. Al-Azzam, A. F. M. (2015) attempted to investigate the impact of service dimensions/attributes on perceived service quality and customer satisfaction based on the question that is there any relationship between tangibility, reliability, responsiveness, empathy, security, and customer satisfaction with services provided by the Arab Bank. The research comes up with the result that the Customer Satisfaction in the Jordanian banking services is significantly affected by Tangibility, Reliability, Responsiveness, Empathy, and security. It also demonstrates that customer's perception is the highest in the reliability area. The findings also indicate that tangibility has a positive influence on customer satisfaction. The findings show that there is a significant relationship between empathy and customer satisfaction, so customers prefer to get bank services face-to-face. Akhade G.N (2016) stated that **a**t present there is no healthcare service quality model available in India to measure the service quality of Indian healthcare sector. It is essential to find out the determinants of Indian Healthcare service quality concern with all stakeholders of healthcare services and to develop a service quality model for healthcare sector in Indian context which explore the relationship between the socio-demographic factors and the perception of service quality. It is also need to know how the different methods of conducting surveys affect the response rates and patients evaluation of service quality and also to develop the relationship between service quality and customer satisfaction, loyalty, profitability and purchase intension.

CONCEPTUAL FRAMEWORK:



Researcher has made an attempt and developed the conceptual framework in this study to measure the impact of relationship between cost reduction strategies on service quality.

Operational Definition:

The operational definitions of the chosen constructs of the conceptual framewrok are given below:

Cost Reduction Strategies:
Some of the cost reductions strategies were adopted in a specialty hospital (where the study was done) are given below:

- Supplier consolidation
- Low cost country sourcing
- Digitalization
- Cash management
- Overhead reduction

Supplier Consolidation:
Supplier consolidation is assigning the total spending to fewer vendors. This will provide greater leverage for supplier negotiations and lower cost. It also increases the service and support and improves quality. Simply reducing the number of suppliers does not save money; the following results should be obtained: Number of suppliers is reduced, prices are negotiated and bill per-supplier basis is decreased.("Supplier Conslidation." N.d, Is Savings Through Supplier Conslidation a Myth," n.d).

Low Cost Country Sourcing (LCCS):
Low cost country sourcing is a procurement strategy in which an organization sources goods from countries where labour charges and production costs are low. The main principle of Low Cost Country Sourcing can be obtained sourcing efficiencies through recognizing and developing cost arbitrage between geographies. Low Cost Country Sourcing is done usually for cost and quality of the products (Low-cost country sourcing, 2018).

Digitalization:
Digitalization is the use of digital technologies; it is a process of moving to a digital business. It improves patient experience in healthcare. It can enable smarter & better utilization of resources and allows on more patient interaction at the point of service. It also provides more centralized operations and management. It secures data and provides an innovative environment. (The Digitalization of the Healthcare Industry: Using Technology to Transoform, 2016)

Cash Management:
Cash management is the process of collecting and managing cash. It is a key component of ensuring financial stability and wealth of a company. Business managers are responsible for overall cash management and its related responsibilities. It also includes reducing the number of accounts receivables, increasing cash collection rates, increasing cash on hand.("Cash-management," n.d).

Overhead Reduction:
Overhead expenses are all costs expect direct labour, direct materials, and direct expenses. It include accounting fees, advertising,interest, insurance, rent, repairs, supplies, taxes, telephone bills, travel expenditures and utilities etc. Overheads are the expenditure which cannot be conveniently traced to or identified with any particular cost unit (Overhead (business, 2018).

SERVICE QUALITY DIMENSIONS:

Ten determinants that may influence the appearance of a gap were described by Zeithaml and Berry in SERVQUAL model (Valarie A.Zeithaml, 2004). They are 'reliability', 'responsiveness', 'competence', 'access', 'courtesy', 'communication', 'credibility', 'security', 'understanding the customer', 'tangibility'.
Later the determinants were reduced to five. They are Reliability, Assurance, Tangibility Empathy and Responsiveness. It is also called as RATER model.
Reliability: Ability to execute the promised service consistently and precisely.
Responsiveness: Readiness to help customers and provide appropriate service.
Service Assurance: Employee's ability to express trust and confidence based on their knowledge and courtesy.
Tangibility: Fully equipped infrastructure, human resources with effective communication system.
Empathy: Caring, Compassion, personal attention the firm provides its customers.

RESULTS AND DISCUSSION

Gender Distribution of the Respondents:

Table 1: Gender distribution of the Respondents

Gender of the employees	Frequency	Per cent	Gender of the patients	Frequency	Per cent
Female	20	90.9	Female	51	43.2
Male	2	9.1	Male	67	56.8
Total	**22**	**100**	**Total**	**118**	**100**
Age of the employees (In years)	**Frequency**	**Per cent**	**Age of the patients (In years)**	**Frequency**	**Per cent**
31-40	9	40.9	Above 50	114	96.6
19-30	13	59.1	41 to 50	4	3.3
Total	**22**	**100**	**Total**	**118**	**100**

Source: Primary Data

Table 1, shows that 90.9 per cent of employees were female and 9.1 per cent of the employees were male.56.8 per cent of the patients were male and 43.2 per cent of the patients were female.
59.1 per cent of employees were under 19-30 years of age group and 40.9 per cent of employees were under 31-40 years of age group.
It shows that 96.6 per cent of the patients were under above 50 years of age group and 3.3 per cent of patients were under 41-50 years of age group.

Designation of the Employees:

Table 2: Designation of the Employees

Designation of the employees	Frequency	Per cent
Administrator	8	36.4
Paramedics	14	63.6
Total	**22**	**100**

Source: Primary data

Table 2, shows that 63.6 per cent of the employees were paramedics and 36.4 per cent of the employees were administrators.

Educational Qualification of Patients:

Table 3: Educational qualification of Patients

Educational qualification	Frequency	Per cent
Illiterate	19	16.1
Others	34	28.8
Post graduate	2	1.7
Under graduate	24	20.3
Higher secondary	39	33.1
Total	**118**	**100**

Source: Primary data

Table 3, shows that 33.1 per cent of the patients were under higher secondary group, 28.8 per cent were under other group which is below 10^{th} standard, 20.3 per cent were under undergraduate group, 16.1 per cent of the patients were under illiterate group and 1.7 per cent of the patients were under post graduate group.

Employees and Patients Opinion on Cost Reduction:

Employee category and cost reduction: It was found that both paramedics (35.7) and administrators (62.5) have chosen supplier consolidation for reducing cost. The next chosen by paramedics (35.7) and administrators (37.5) was digitalization.

Patient willingness to take low quality lens for lower price: It was found that 99.2 per cent of the patients are not willing to take up low quality lens at low price, 0.8 per cent of the patients are willing to take up low quality lens for low price. It clearly indicates cost reduction is not an issue for patient in choosing the lens. They have given more importance for quality than price.

Possibility of Cost Reduction Strategies - Employee Opinion:

Table 4- Employee opinion on possibility of cost reduction strategies

Cost reduction strategies	Opinion on possibility of cost reduction				
	In per cent				
	Strongly agree	**Agree**	**Neutral**	**Disagree**	**Strongly disagree**
Supplier consolidation	0	46.6	0	75	0
Low cost country sourcing	0	0	0	0	0
Digitalization	0	40	33.3	25	0
Cash management	0	13.3	33.3	0	0
Overhead reduction	0	0	33.3	0	0
Total	**0**	**100**	**100**	**100**	**0**

Source: Primary data

Table 4, shows the cross tabulation between possibility of cost reduction and suggestions for cost reduction. 75 per cent employees Disagree on possibility of cost reduction but suggested Supplier consolidation for reducing cost, 33.3 per cent employees had neutral opinion about possibility of cost reduction but suggested Digitalization for reducing cost, 33.3 per cent employees had neutral opinion about possibility of cost reduction but suggested Cash management and 33.3 per cent employees had neutral opinion about possibility of cost reduction but suggested Overhead reduction.

Employee General Opinion on Cost Reduction:

Table 5: Employee General Opinion on cost reduction

Questions	Opinion (Percent)					
	Strongly agree	**Agree**	**Neutral**	**Disagree**	**Strongly disagree**	**Total**
Possibility of cost reduction	0	22.7	18.2	59.1	0	**100**
Cost reduction affects patient flow	4.5	27.3	9.1	50.0	9.1	**100**
Should quality be compromised by reducing cost	4.5	31.8	4.5	45.5	13.6	**100**
Cost reduction affects the existing system	4.5	31.8	18.2	40.9	4.5	**100**
Is cost reduction essential	0	4.5	18.2	54.5	22.7	**100**

Source: Primary Data

Table 5, shows that 59.1 per cent of employees disagree that cost reduction is possible in hospital cataract services, 22.7 per cent of the employees agree that cost reduction is possible in services. 50 per cent disagree that cost reduction affects patient flow. 45.5 per cent disagree that quality have to be compromised by reducing cost. 40.9 per cent disagree that cost reduction affects the existing system.54.5 per cent of the employees disagree that cost reduction is essential in services.

Essentiality of Cost Reduction Strategies- Employee Opinion:

Table 6: Employee opinion on essentiality of cost reduction strategies

Suggestions for cost reduction	Essentiality of cost reduction				
	In per cent				
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Supplier consolidation	60	38.4	33.3	100	0
Low cost country sourcing	0	0	0	0	0
Digitalization	40	46.1	0	0	0
Cash management	0	15.3	33.3	0	0
Overhead reduction	0	0	33.3	0	0
Total	**100**	**100**	**100**	**100**	**0**

Source: Primary data

Table 6, shows the cross tabulation between essentiality of cost reduction and suggestions for cost reduction. 100 per cent of the employees Disagree that cost reduction of lens is essential but suggested Supplier consolidation for cost reduction. 33.3 per cent of employees had neutral opinion on essentiality of cost reduction but suggested supplier consolidation, 33.3 per cent of employees had neutral opinion on essentiality of cost reduction but suggested cash management and 33.3 per cent of employees had neutral opinion on essentiality of cost reduction but suggested overhead reduction. 46.1 per cent of employees agree that cost reduction is essential and suggested digitalization, 38.4 per cent of employees agree that cost reduction is essential and suggested supplier consolidation, 15.3 per cent of employees agree that cost reduction is essential and suggested cash management.
60 per cent of employees strongly agree that cost reduction is essential and suggested supplier consolidation, 40 per cent of employees strongly agree that cost reduction is essential and suggested digitalization.

Various Cost Involved and Consumables and Equipment Used in Cataract Surgery:
It is mandatory to carry out all the test mentioned below before posting a patient for a surgery, the investigative procedures are as follows:

Table 7: Various cost involved and consumables, equipment's used in cataract surgery

Investigative procedure	Current market price of investigative procedures (In Rs)
Blood investigations	3340
ECG	150
A scan	500
Blood sugar	90
Xylocaine test dose	Prior to surgery the test is done, which is covered in the surgery
Opinion from physician if the patient is diabetic, hypertensive, heart patient	200
Anesthetic fitness	
Auto refractometer	250
Visual acuity (unaided)	
Visual acuity with pinhole	
Subjective refraction	
Tension	
Slit lamp examination after dilatation	
Fundus examination	

Source: Secondary data

Table 7, clearly indicates the actual amount to be spent for consumables; equipment's used in cataract surgery.

Impact of Cost Reduction on Patient Flow- Employee Opinion:

Table 8: Employee opinion on impact of cost reduction on patient flow

Opinion On cost reduction of lens and its impact on patient flow	Frequency	Per cent
Strongly agree	1	4.5
Agree	6	27.3
Neutral	2	9.1
Disagree	11	50
Strongly disagree	2	9.1
Total	**22**	**100**

Source: Primary data

Table 8, shows that majority (50 per cent) of the employees disagrees that the flow of patients gets affected by reducing price of lens used for cataract. In comparison with Secondary data result, the employee opinion clearly indicated that Cost reduction strategies have no impact on patient flow which is the component of performance outcome.

Patients and Employees Opinion on Service Quality Dimensions:

Table 9: Service Quality dimensions- Weighted Average Analysis

DIMENSIONS	PATIENTS	EMPLOYEES
Reliability	4.49	2.22
Assurance	4.49	3.27
Empathy	4.72	4.20
Responsiveness	4.68	3.22
Tangibility	4.29	2.72

Source: Primary data

Table 9, shows that patients have given high weighted mean for Empathy (4.72) followed by Responsiveness (4.68), Reliability (4.49) and Assurance (4.49) and Tangibility (4.29). Employees have given high weighted mean for Empathy (4.20) followed by Assurance (3.27), Responsiveness (3.22) and Tangibility (2.72) and Reliability (2.22).

Patient Opinion on Service Qulaity Dimensions with Respect to Price:

The researcher has made an attempt to analyze various service quality dimensions in association with the age, education, occupation, income of the patient respondents based on ANOVA.

H_0-There is no significant difference among Age groups, Education groups, Occupation groups, Income groups and their opinion on Service quality dimensions with respect to price.

H_1-There is significant difference between Age groups, Education groups, Occupation groups, Income groups and their opinion on Service quality dimensions with respect to price.

Table 10: Patient opinion on Service Quality dimensions with respect to Price and their demographic profile- ANOVA

Service quality dimensions	Age		Education		Occupation		Income	
	F value	Sig	F value	Sig	F value	Sig	F value	Sig
Reliability								
Price is same at all times	0.119	0.730	0.437	0.782	0.529	0.714	0.520	0.721
Price is same at all branches	0.009	0.924	2.743	0.032	0.137	0.968	0.972	0.426
Assurance								
Consultation varies on price	1.280	0.260	1.352	0.255	0.868	0.485	0.343	0.848
Appropriateness varies on price	0.055	0.816	1.606	0.178	1.846	0.125	1.892	0.117

Service quality dimensions	Age		Education		Occupation		Income	
	F value	Sig	F value	Sig	F value	Sig	F value	Sig
Empathy								
Staffs overlook ability to pay	0.463	0.498	0.469	0.759	0.127	0.972	1.179	0.324
Attitude varies on price	0.019	0.891	1.239	0.299	0.555	0.696	1.536	0.196
Responsiveness								
Clarification of doubts varies on price	0.76	0.783	1.094	0.363	0.854	0.494	1.878	0.119
Post-surgical response varies on price	2.253	0.136	1.029	0.395	1.174	0.326	1.570	0.187
Tangibility								
Ambience did not vary on price	1.088	0.299	0.467	0.760	1.584	0.184	0.816	0.518
Facilities did not vary on price	0.734	0.393	0.765	0.550	0.208	0.933	0.213	0.931

Source: Primary data

Table 10, shows that H_0 is accepted and it implies that there were no significant difference between age groups, education groups, occupation groups, income groups of patients and their opinion on all the Service quality dimensions with respect to price. Based on the observation of the researcher, it was found that the patients were identified as closed groups, since all the patients are above 60 years of age, so their expectations are also similar. Hence there was no significant difference on their opinion on service quality dimensions. Though there were small differences in opinion it didn't have much impact on the hypothesis testing. Due to time factor researcher was not able to collect data from diversified group.

Correlation Between Patient Satisfaction of the Treatment Based on Price and Service Quality Dimensions:

Table 11: Correlation between patient satisfaction of the treatment based on price and service quality dimensions

	Satisfaction with the treatment based on Price
Reliability	-.080
Assurance	0.227*
Empathy	-0.090
Responsiveness	-0.180
Tangibility	0.177

**Correlation is significant at the 0.01 level (2-tailed)
*Correlation is significant at the 0.05 level (2-tailed)
Source: Primary data

Table 11, shows that Reliability (r= -0.080), Empathy (r=-0.090) and Responsiveness (r=-0.180) were negatively correlated with the satisfaction of the treatment. Assurance (r=0.227) and Tangibility (r=0.177) has positive correlation over satisfaction of the treatment. It shows even if they provide better service quality on Reliability, Empathy and Assurance the satisfaction with the treatment is not increased. Hence the organization has to consider the Reliability, Empathy and Responsiveness aspect of service quality dimensions.

Regression Analysis of Patients:

Null hypothesis: There is no significant impact of service quality dimensions on satisfaction level of the treatment.

Regression determines relationship between two variables. One variable is independent which the cause of the behavior is and another one is dependent. Multiple regression is the relationship between more than two independent variables in the analysis and the relationship describe through an equation. Regression analysis is a mathematical expression for finding value of a dependent variable the basis of independent variable.

The linear equation is $Y= a+b_1x_1+b2x2\ldots. +b_nx_n$

Where, Y is the dependent variable which is to be found.

X_1, X_2, X_3…. Up to X_n are the independent variables with which predictions to be made and b_1, b_2… b_n are coefficients of the variables.

In this study Dependent variable is Y (Satisfaction of the treatment) and Independent variables are X1(Reliability), X_2(Assurance), X_3(Empathy), X_4(Responsiveness), X_5(Tangibility).

Multiple r value= 0.311
R-Square value= 0.097
F-Value= 2.402
Significance P value= 0.041

Table 12: Satisfaction of the treatment and service quality dimensions

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	4.293	1.622		2.647	.009
Reliability	-.311	.188	-.159	-1.653	.101
Assurance	.484	.220	.238	2.199	.030
Empathy	-.057	.301	-.025	-.189	.851
Responsiveness	-.143	.211	-.090	-.677	.500
Tangibility	.101	.159	.065	.636	.526

Dependent Variable: Are you satisfied with the treatment
Source: Primary data

The multiple regression coefficient is 0.311 measures the degree of relationship between actual values and the predicted value of Satisfaction. The value R-Square is 0.097 simply means that about 9.7% of the variation as adjustments, the user of reliability, assurance, empathy, responsiveness, tangibility as the independent variable is significant at 1% level.

Multiple regression equation is $y= 4.293-0.311x_1+0.484x_2-0.057x_3-0.143x_4+0.101x_5$

Table 12 shows, the coefficient of X_1 is -0.311 represents the partial effect of reliability on satisfaction, holding other variable as constant. The estimated negative sign implies that such an effect is negative that satisfaction score would decrease by 0.311 and this coefficient value is significant at 5% level. The coefficient of X_2 is 0.484 represents the partial effect of assurance on satisfaction, holding other variable as constant. The estimated positive sign implies that such an effect is positive that satisfaction score would increase by 0.484 and this coefficient value is significant at 5% level. The coefficient of X_3 is -0.057 represents the partial effect of empathy on satisfaction, holding other variable as constant. The estimated negative sign implies that such an effect is negative that satisfaction score would decrease by -0.057 and this coefficient value is significant at 5% level. The coefficient of X_4 is -0.143 represents the partial effect of responsiveness on satisfaction, holding other variable as constant. The estimated negative sign implies that such an effect is negative that satisfaction score would decrease by -0.143 and this coefficient value is significant at 5% level. The coefficient of X_5 is 0.101 represents the partial effect of tangibility on satisfaction, holding other variable as constant. The estimated positive sign implies that such an effect is positive that satisfaction score would increase by 0.101 and this coefficient value is significant at 5% level.

Service Quality Dimensions: Employee Opinion (T- Test)

The researcher has made an attempt to analyze the opinion of the employees on service quality dimensions using T-test.

H_0- There is no significant difference between age groups of employees and their opinion on service quality dimensions with respect to price.

H_1- There is significant difference between age groups of employees and their opinion on service quality dimensions with respect to price.

Table 13: Age groups of employees and their opinion on service quality dimensions with respect to price

Service quality dimensions	Age groups		Designation Groups	
	T-Value	Significance value	T-Value	Significance value
Reliability				
Price is same at all times	0.638	0.531	2.843	0.010**
Price is same at all branches	1.033	0.314	1.048	0.307

Service quality dimensions	Age groups		Designation Groups	
	T-Value	Significance value	T-Value	Significance value
Assurance				
Consultation varies based on Price	-0.324	0.749	-1.141	0.267
Appropriateness varies based on Price	-2.491	0.022*	-2.084	0.051
Empathy				
Staffs overlook ability to pay	-0.542	0.594	1.140	0.268
Attitude varies on Price	-1.095	0.286	-0.152	0.881
Responsiveness				
Clarification of doubts varies on Price	-1.516	0.145	0.159	0.876
Post-surgical response varies on Price	-0.983	0.337	-0.734	0.472
Tangibility				
Ambience did not vary on Price	-1.856	0.078	-0.616	0.545
Facilities did not vary on Price	-0.959	0.349	1.167	0.257

Source: Primary data

Table 13, shows H_0 is rejected on the opinion on services provided with respect to price is the same at all times; hence there is significant difference between designation groups of employees and services provided with respect to price is the same at all times at 1per cent level of significance.
H_0 is rejected on the opinion in appropriateness of services provided with respect to price; hence there is significant difference between age groups of employees and appropriateness of services provided at 5 per cent level of significance.

SUGGESTIONS:

The following suggestion are based on the analysis and findings of this study
For cost reduction: Since the respondents have given more importance to supplier consolidation and digitalization. Supplier consolidation involves assigning the total spending to fewer vendors. This will provide greater leverage for negotiations and lowering the cost of the materials. It also increases the service and support and improves quality. Simply reducing the number of suppliers does not save money; the following results should be obtained:

- Number of suppliers is reduced.
- Prices are negotiated.
- Bill per-supplier basis is decreased.

Digitalization is the use of digital technology to reframe a business model. It improves patient experience in healthcare. It can cause impact on every aspect of service delivery and operations. It also provides more centralized operations and management. It secures data and provides an innovative environment.
For improving awareness of Employee: The organization can train the employees in the concept of services provided in relation with pricing strategies of the organization. No employees in this hospital are fully-aware of the cost and pricing of the services. Knowing the cost and pricing of the services provided by the management would help the employees to work more on the cost reduction strategies.
For improving awareness of Patient: The patients can be enlightened more about the price of the surgery, the investigations involved, awareness of the lens used for surgery and the amount spent for the surgery. This would help the patient to be aware, clarify and would help them to choose better packages with greater quality. The patient satisfaction level also depends upon the awareness which they have about the lens which is used for them during the surgery, hence the counselors can be brief in explaining them about the various types of lens and also a dummy lens or a model can be shown to the patients for their awareness. Awareness of patients plays a major role in the satisfaction level of the surgery. Hence patients should be clarified with more details.
For improving Service Quality: The hospital has been serving and treating patients through insurance, but patients who are getting treatment by paying cash are more in the past three months rather than insurance patients, which is evident through the secondary data obtained from records of the hospital. Patient's expectations is mostly on quality service not on price reduction or lowest priced lens, which clearly indicates

that patients are willing to spend for quality lens and quality care. Therefore the organization can focus on service quality aspects than on cost reduction strategies. If at all the patient opt for another hospital the reason might be for poor service quality rather than on price. So the management of the hospital can focus more on service quality which will help to attract and retain more patients in the future.

For reducing Gap on Service Quality: There are few gaps identified on the service quality dimensions based on the patients and employees perception. The highest gap is on reliability followed by tangibility, responsiveness, assurance, empathy. So management needs to focus much on Service quality to reduce this gap between Employee and Patient.

For improving satisfaction of the treatment: Patients data result indicated that the Reliability, Empathy and Responsiveness are negatively correlated with the satisfaction of the treatment. Hence the organization has to consider these three aspects namely Reliability, Empathy and Responsiveness of service quality dimensions for improving satisfaction of the treatment.

CONCLUSION:

The primary goal of this dissertation is to study about impact of Cost Reduction Strategies on Service Quality of a Single Cataract Surgery in a Specialty hospital and Multi-located Branches, Chennai.

The target groups of the study were employees (Paramedics and Administrators) and patients. Based on their opinion the dimensions of service quality with respect to pricing strategies were evaluated.

The Major finding of the study is that the cost reduction strategies have no impact on patient flow of performance outcome but have an impact on service quality. Patients are not waiting for insurance but willing to pay cash for their treatment. They are ready to spend cash on their own for getting quality treatment. The highlights of the hospital are the process flow, cash billing and time in and time out of the registration process in each department are monitored regularly and digitally. Quality indicators are monitored and continuously updated in Operation Theatre. Lab reports and discharge summary are generated on stipulated time by the management. So Cost Reduction Strategies have no significant impact on the process flow and turnaround time of Performance Outcome. Cost Reduction Strategies are found to have less impact on existing processing system of the hospital. But the patients are not ready to compromise the service quality at any cost. If at all a patient opts for another hospital for treatment the reason may be for poor service quality and not because of price of treatment. Therefore the need of the hour is that the hospital management should focus more on service quality than on cost reduction to attract more patients and to survive in the competitive environment.

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