



A PARADOX OF SERVICE QUALITY IN HEALTH CARE

An empirical study in the city of Coimbatore

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Abstract

Health care is a human right. According to World Health Organization every citizen of a country should be able to gain access to quality health care when required. The industry in India has grown leaps and bounds over the last two decades and is on the growth trajectory ever since. The most interesting aspect of health care is though the services offered to the people are termed 'services' and are intangible, that outcomes of the 'services' are very tangible and measurable too. In this context, the researchers intend to find out the paradoxical nature of health care services with special reference to the city of Coimbatore in Tamilnadu, India, as the city has been in the forefront of health care economics of the state. The paper tries to analyze and find out the service quality determinants applicable in health care and also the paradox that exists within, along with customer satisfaction on service quality. The research has been carried out with statistical package for social sciences with descriptive tools and regression model. The findings of the study stated that customers feel that Intangible factors are more important than Tangible elements.

Keywords : Tangible, In-Tangible, Health-Care, Paradox, Coimbatore

Introduction

The process of modernization for the last hundred years has been marked by an ever-increasing growth of service sectors in modern economies. The growth in question has reached such a point that service sectors have accounted for approximately two-thirds of the total worldwide GNP at the beginning of the twenty-first century.

Because of this phenomenal increase in the importance of service sectors, they have been subject of an extensive research in the last quarter of the century, which explored and analyzed the quality of the service produced and the consumer satisfaction quality.

These works examine a wide range of sub issues ranging from the theoretical measurement of the determinants of service quality to sector-specific empirical investigations. As vast as the literature may be, it is not yet exhausted, and hence leaves room for, the discovery and analysis of some interesting phenomena encountered in practice. The paper, contributes to this literature by bringing into light one

such phenomenon which is largely unnoticed in the literature, namely, in certain cases, there might exist a fundamental asymmetry and difference between the influences of tangible and intangible factors on service quality. The difference in certain contexts, as in the case of the Coimbatore health-care sector, constitutes a paradox to be explained.

In the second section the paper explains, in the context put forward in the literature, two concepts that are central to the main topic of the paper, namely service quality and consumer satisfaction. The third section presents the model and empirical results. The concluding analysis explains why the empirical results constitute a paradox, and explores some of the reasons that give rise to the paradox.

Service quality has received a significant amount of attention by both researchers and practitioners. It has been defined in a variety of ways. Therefore, there is no universal definition of quality. Many quality gurus define quality concept using different approaches. Juran refers to the user approach as "fitness of use". Crosby described the manufacturing based approach as "conformance to requirements". In

business literature, the customer's perception of quality has been the major focus in studies done on service quality. Hence, service quality is often conceptualized as the comparison of service expectations with actual performance perceptions. On an operational level, research on service quality has been dominated by the SERVQUAL instrument, which is based on a so-called gap model. Gap model is recognized today as a major contribution to the marketing literature. The definition of each of the gaps is given below:

- (1) Gap 1: difference between consumer expectations and management perceptions of consumer expectations.
- (2) Gap 2: difference between management perceptions of consumer expectations and service quality specifications.
- (3) Gap 3: difference between service quality specifications and the service actually delivered.
- (4) Gap 4: difference between service delivery and what is communicated about the service to the consumer.
- (5) Gap 5: difference between consumer expectations and perceptions. It shows four gaps identified on the marketer side of the model (gaps 1-4) and a fifth gap, which represents the comparisons between expectations and perceptions of service received on the consumer side of the model.

In the disconfirmation theory, the perception of service quality is conceptualized as a comparison of the expected level of service and the actual service performance. Expectations are the wants of consumers, that is, what they feel a service provider should offer.

The customer evaluate, the service, and develops perceived service quality. The factors include: access, communication, competence, courtesy, credibility, reliability, responsiveness, security, tangibles, and understanding. Therefore, if the customer's performance perceptions (based on the above ten dimensions) exceed the customer expectations, the service provider provides quality service. The difference in scores determines the level of service quality:

$$\text{Service Quality} = \text{Perceived Service} - \text{Expected Service}$$

The use difference score causes a number of problems in such areas as reliability, discriminate validity, and variance restrictions. Therefore, they concluded that difference scores should not be used to measure service quality. Through an empirical test, SERVQUAL from a modification of ten dimensions proposed in 1985 to five dimensions in 1988. These are tangibles, reliability, responsiveness, assurance, and empathy. In their study, the data on the 22 attributes were analyzed and resulted in five dimensions. In order to improve the SERVQUAL scale and to verify its applicability. Were eliminated the negatively worded items, second, two new items were replaced with two original items to fully capture the dimensions, and third, importance weights to the measurement process were added. The weighed service quality is given below:

$$\text{Service Quality} = \text{Importance} * (\text{Perceived Service} - \text{Expected Service})$$

In 1992, Cronin and Taylor investigated the conceptualization and measurement of service quality and the relationships between service quality, consumer satisfaction and purchase intentions (Cronin and Taylor, 1992). According to Cronin and Taylor, the disconfirmation theory is intended to be a measure of satisfaction, not of service quality. They stated that service quality can be conceptualized as similar to an attitude, and can be operationalized by the adequacy-importance model.

In particular, they maintained that performance, instead of performance - expectation, determines service quality and is developed an alternative measurement tool. It is called SERVPERF. In their empirical study, SERVQUAL appeared to have a good fit in only two of the four industries examined, whereas SERVPERF had an excellent fit in all four industries. A similar result was obtained from regression analyses:

$$\text{Service Quality} = \text{Performance}$$

$$\text{Service Quality} = \text{Importance} * \text{Performance (weighted)}$$



Later SERVQUAL structure was modified from five dimensions to three dimensions, which are reliability, tangibility, and a single factor that combines responsiveness, assurance, and empathy. Rust and Oliver developed another conceptual model to measure service quality. This model consists of three dimensions, which are named as service product, service delivery and service environment. Service product refers to the technical quality of the service. Service delivery refers to the functional quality of the service. Finally, the service environment includes the internal and external environment (Rust and Oliver, 1994). As an alternative approach, proposed a hierarchical model of service quality for the retail sector. In service quality there are three levels. The first level includes consumers' overall perceptions of service quality. Second level is a dimension level, which consists of five factors, namely physical aspects, reliability, personal interaction, problem solving, and policy. The third level is the sub-dimension level. This level includes appearance, convenience, promises, doing it right, inspiring confidence, and courteous/helpful.

Customer satisfaction

During and after the consumption of a service or product, consumers develop feelings of satisfaction or dissatisfaction. In the literature, there are a number of studies related to satisfaction. Some of them are expectancy of disconfirmation, assimilation or cognitive dissonance, contrast, assimilation-contrast, equity, attribution, comparison-level, generalized negativity, and value-precept. Although there is a variety of theoretical approaches to explain customer satisfaction and dissatisfaction, the most widely used model is based on the expectancy disconfirmation theory, developed by Richard Oliver. In the expectancy disconfirmation model, disconfirmation refers to the consumer's comparison of the service performance to an expectation, as illustrated in the following equation:

Satisfaction $\frac{1}{4}$ = f (Perception-Expectation)

Customer expectation of services is set in two

stages. First, the consumer develops expectation about the company during the customer's first encounter with the service firm, via advertising and customer word of mouth. Second, after a previous encounter with the firm, the consumer compares their expectations to the actual product performance.

The model

The paper uses a model that is based on the relationships among the constructs. The model is based on the expectancy/disconfirmation paradigm, which provides the theoretical basis for the link between service quality and satisfaction. To examine whether perceptions of service quality are directly related to the customer's satisfaction. When service quality is used to refer to specific information about the provided services, it is recognized as an antecedent of customer satisfaction. Therefore, the proposed model hypothesizes that satisfaction is a consequence of service quality. Many empirical studies supported this model for identifying the causal link between service quality and satisfaction.

The determinants of service quality are divided into two main categories, namely tangible factors, which refer to technology, physical facilities, personnel, and communication material etc., and intangible factors, which consist of five sub-factors, namely Assurance, Responsiveness, Reliability, Courtesy, and Empathy. Reliability refers to the ability to perform the promised service dependably and accurately. Responsiveness reflects the willingness to help customers and provide prompt service.

Objectives of the Study

- a. To understand the determinants of service quality in health care
- b. To analyze the relevance of customer satisfaction on service quality
- c. To know the impact of tangible and intangible components
- d. To identify the gap score in service quality

Research Methodology

A structured questionnaire was developed based on the dimensions identified from literature and was

circulated to a sample of respondents of 140 members by using simple random sampling technique. Data was gathered and tabulated using SPSS and required editing was performed to remove erroneous information. Statistical analysis was done on the data using descriptive techniques, ANOVA and Regression analysis.

Analysis and Interpretation

The analysis of the data essentially comprised the following steps:

- (1) Computing the service quality (gap) score for each attribute separately.
- (2) Establishing a summated scale, which is formed by combining several individual variables into a single composite measure to determine factors of the service quality.
- (3) Using REGRESSION to test the conceptual model outlined in Figure 2, linking service quality and customer satisfaction.

Computing the SERVQUAL (gap) score for each variable.

The first step in the assessment of service quality is the calculation of the gap score. One method for determining the relative importance of service attributes is to measure customer expectations or ideals and to calculate the gap between the expected and actual service. Gaps can be calculated for each attribute separately and the attribute with the biggest gap should be considered for improvement:

Factor Analysis (Summated Factor)

In this study, six factors were formed related to service quality. Summated factor combines related variables into a single composite measure forms. The first factor was developed by getting the average score of the first nine variables. It is named as "Tangibility". The next five variables, which are from ten to fourteen, were averaged to develop the second factor. The second factor is named as "Reliability". Third factor is labeled as "Responsiveness" and includes eight variables, which are from 15 to 22. The next one is named "Assurance". This factor has five variables. These variables were coded from 23 to 27. The fifth factor is

named as "courtesy" and includes five variables, which are 28 to 32. The last one is named as "Empathy". It has two variables, which are coded in 33 and 34. The Cronbach's alpha measure of reliability for the six factors were 0.786 for factor 1, 0.3421 for factor 2, 0.7879 for factor 3, 0.4543 for factor 4, 0.8323 for factor 5, and 0.8562 for factor 6. Cronbach's alpha measure for Factor 1, factor 3, factor 5 and factor 6 are above the traditional acceptable value of 0.70 in research. The value for factor 2 was found as a score of 0.3421. This value is not close to the traditional acceptable value of 0.70. Therefore, the variable 11 was removed and then again the value of Cronbach's alpha was calculated as a score of 0.7880. This value is above the traditional acceptable value of 0.70. The value for factor 4 was found as a score of 0.4543.

This value is also not close to the traditional acceptable value of 0.70. Therefore, the variable 24 was removed and then again the value of Cronbach's alpha was calculated as a score of 0.7397. This value is above the traditional acceptable value of 0.70. As a result, all of the factors were accepted as being reliable for the research.

$GAP\ SCORE = Perception\ Score\ (P) - Expectation\ Score\ (E)$

Regression Analysis

Dependent Variable: Overall Satisfaction

Independent Variables

- | | |
|----------------|-------------------|
| 1. Courtesy | 2. Assurance |
| 3. Reliability | 4. Responsiveness |
| 5. Empathy | 6. Tangibility |



ANOVA^b

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	40.613	6	6.769	753.811	.000 ^a
Residual	1.185	132	.009		
Total	41.799	138			

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

b. Dependent Variable: Overall Satisfaction

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.986 ^a	.972	.970	.095

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

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.221E-05	.068		.001	.999
	Tangibility	8.938E-02	.028	.101	3.155	.002
	Courtesy	.246	.037	.256	6.640	.000
	Assurance	.242	.038	.252	6.363	.000
	Reliability	.111	.036	.115	3.128	.002
	Empathy	.149	.028	.150	5.252	.000
	Responsiveness	.166	.034	.179	4.892	.000

a. Dependent Variable: Overall Satisfaction

Inference on Analysis

Overall satisfaction of the patients is highly impacted by independent factors such as tangibility, courtesy, assurance, reliability, empathy and responsiveness which is indicated by the significance level of .000 and also the regression model is deemed fit for further analysis.

Beta Value of .972 indicates that all the independent variables exert an impact of 97% on the dependent variable.

Out of the 6 independent variables Courtesy exerts the maximum impact on the overall satisfaction of patients with a B value of 0.246 followed by Assurance (0.242) given by the health care personnel to the patients that exerts more impact on the overall satisfaction. Responsiveness (0.166) of the hospital personnel to the patients and their care takers, Empathy (0.149) shown to the patients, and Reliability (0.111) of the health care service provider are the other independent factors that show consistent influence on the Overall satisfaction of the patients.

Conclusion

Based on the extensive literature review, the researchers were able to find the various factors that have an impact on the satisfaction levels of patients and their care takers in a health care set up. Apart from the actual treatment and healing the patient receives from the hospital, there are several other factors which are intangible that contribute towards determining the satisfaction level of the patients. The intangible factors are many out of which the most dominant factors such as Courtesy of the hospital staff, Assurance given by the health care personnel to the patients, Responsiveness, Empathy and Reliability were taken into consideration for this study along with a combined factor of Tangibility.

After detailed analysis it was found that the Intangible factors mentioned above have greater impact on the overall satisfaction of the patients than the tangible factors.

Hence, it is concluded that hospitals and health care facilities in India need to focus more on the Intangible factors which play a major role in the Patient

Satisfaction than just concentrating on the treatment of people.

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