

MEASURING SUPPLIER'S SERVICE QUALITY AND CUSTOMER SATISFACTION USING SERVQUAL

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Abstract: Service quality can be used as a strategic differentiation weapon to build an organizational distinctive advantage. To be competitive, service supplier should embrace customer-driven quality which represents a proactive approach in satisfying the needs of the customers by gathering information about their needs and preferences and then designing and delivering the service that satisfy them. Service suppliers should continuously monitor the service quality perception of its customers, and make necessary improvements of the design and the delivery of the service. This study attempts to determine the expectations, perceptions, and the level of satisfaction of the Kangar General Hospital staff on the quality of services given by the Faber Medi-Serve as a contract hospital service provider. The internationally used SERVQUAL model is applied. An analysis of the staff responding to the survey revealed that there was an overall service quality gap between staff's perceptions and expectations across all of the five service quality dimensions namely, in the order of magnitude, responsiveness, reliability, assurance, empathy and tangibility.

Keywords: Service quality, SERVQUAL, Hospital

INTRODUCTION

Service quality can be used as a strategic differentiation weapon to build an organizational distinctive advantage. For services, even though the assessment of service quality by the service supplier is made during the service delivery process, the design of the service process is equally important. To be competitive, service supplier should embrace customer-driven quality which represents a proactive approach in satisfying the needs of the customers by gathering information about their needs and preferences and then designing and delivering the service that satisfy those [1].

As customers do not easily articulate service quality, the recipients of the service can only assess it, hence making service quality measurement more of a subjective rather than objective. The measurement of service quality then has to be based on perceived quality [4] [2], or the difference between what the customers expect to receive (expectation) from the service and what the customers actually received (perception), the core framework of the SERVQUAL model of measuring service quality by Parasuraman *et al.* [6]. This gap model and the SERVQUAL are the main research framework and instrument used in this study.

Faber Medi-Serve (FMS) is one of the private firms appointed by the Malaysian Ministry Of Health to operate and manage support services to the government hospitals. This study examined the Kangar General Hospital staff's perception, expectation, and satisfaction on the services delivered by FMS.

FMS services cover management and integration of the following area:

Bio-Medical Engineering Maintenance Service cover the engineering maintenance of all biomedical equipment operated by the hospitals including diagnostic, therapeutic, operating theaters, laboratory, and radiology. FMS is responsible to make sure that all bio-medical equipment undergoes comprehensive preventive maintenance, and to attend to any equipment breakdown within a stipulated response time.

Facilities Engineering Services provide mechanical, electrical, and civil engineering support services including electrical systems, medical gas supply along with air-conditioning, fire protection, water, sanitary and sewerage system, roads and drains, hospital ground maintenance, landscaping and even pest control.

Clinical Wastes Services consists wholly or partly of human or animal tissues, blood or other body fluids, excretion, drugs or other pharmaceutical products. FMS offers a complete clinical wastes management and control services including collection, storage, transportation, treatment and disposal.

Cleansing and Housekeeping Services manage the overall general cleaning and housekeeping of the hospitals including collection and disposal of nonclinical wastes.

Linen and Laundry Services provide management of linen and laundry services which include supply of clean and laundry of hospital linen.

Management Information System Services operate and maintain the Ramco System EMS, the management information system of the hospital.

Literature Review

In service, the human element is central to effective operations. The fact that the service processes simultaneously involve the customers and the service outcomes are immediately consumed, customers are able to assess the quality of the service almost immediately. Since customers are essentially human beings, and no human beings are ever satisfied with what they have for an extended time, management of service and service quality has to be as dynamic and flexible as the nature of customer needs.

As customers do not easily articulate service quality, they can only assess it, thus making quality measurement more subjective than objective. Gronroos [2] perceived service quality as a result of what customer received and how they received it. Webster [8] defined service quality as a measure of how well the service level delivered matches the expectations of the customers on a consistent basis. Parasuraman *et al.* [6] defined service quality as 'perceived by customers and stems from comparison of their expectations of the service they will receive with their perceptions of the performance of that of the service provider.

Parasuraman *et al.* [7] define customers' evaluation of service quality as a function of the gap or difference between expected service and perceived service, henceforth identified five gaps that can result in unsuccessful, nonquality service delivery. Customer satisfaction with a service can be defined by comparing the perceptions of the service received with the expectations of the service desired. When perceptions exceed expectation, then customers are satisfied. However, when the customer's expectations exceed perceptions, then the customer is dissatisfied.

It is generally agreed that service quality is a multi dimensional concept. It may mean different things to different people. Based on extensive exploratory studies on service firms in the United States, Parasuraman *et al.* [6] identified ten determinants or dimensions of service quality: accessibility, reliability, responsiveness, competence, courtesy, communication, credibility, security, understanding customers, and tangibles. Through further research, these ten determinants were factor-analyzed to five determinants: tangibles, reliability, responsiveness, assurance, and empathy [7].

Tangibles refer to the physical facilities, equipment, landscape, and appearance of personnel, which customers can see, hear, and touch. Normally these may not be part of the actual service delivery but can have an important influence on the customer's satisfaction with the service.

Reliability refers to the consistency and dependability of the organization, whether the organization performs the service right the first time and the extent the organization fulfill its promises.

Responsiveness refers to the organization's willingness to help customers and provide prompt response to any service required.

Assurance refers to the knowledge and courtesy of the personnel of the organization, and the ability of these personnel to inspire trust and confidence in the customers.

Empathy refers to the caring and individualized attention given by the organization or personnel of organizations to request for service by customers.

To measure customer satisfaction with different dimensions of service quality, Parasuraman *et al.* [7] developed a multiple-scale survey research instrument called SERVQUAL. The first section of the instrument contains questions pertaining to the customer's expectations, and the second section contains questions that capture perceptions of what the customer actually received from the service provider. The 22 statements in the instrument describe aspects of the five service quality dimensions.

According to Foster [1], the SERVQUAL instrument has many advantages: it has been accepted as standard for assessing different dimensions of service quality; it has been shown to be valid; it has been demonstrated to be reliable, meaning that different readers interpret the question similarly; it is parsimonious; and it has standardized analysis procedure to aid interpretation and results.

MATERIALS AND METHODS

The questionnaire was adopted based on the 22 items in the SERVQUAL model developed by Parasuraman *et al.* (1988) [7]. Some modifications and adaptations were made to some of the questions to make them more relevant to the services provided by the FMS. The 22 items used by Youssef *et al.* (1996) [9] in the evaluation of the health care quality in the NHS were also referred to.

A 5-point Likert scale was used for the scoring system whereby 1 representing least important (expectations)/very poor (perceptions), and 5 representing most important (expectations)/very good (perceptions).

Of 400 questionnaires given out, a total of 163 questionnaires were collected back and analyzed making a response rate of 40.75 %. Face-to-face interviews were also conducted with five hospital personnel of various ranks including a medical officer, a pharmacist, a diagnostic and imaging technical executive, and two staff nurses, seeking in-depth information pertaining to their expectations and perceptions on the quality dimensions of the services given by FMS.

RESULTS AND DISCUSSIONS

Results

As previously stated, one of the research objectives was to determine the expectations and the perceptions of services provided by FMS in the eyes of Kangar General Hospital' staff. The expectations of the hospital staff along with the performance of FMS as perceived by the hospital staff were analyzed together with the service gaps for each statement and dimension as described in Table 1.

Table 1: Mean Expectations and Perceptions of FMS Service Quality

Statements	Expectation	Perception	Service gap
<i>Tangibles</i>	4.38	3.29	-1.09
Up to date facilities	4.08	3.38	-0.70
Staff neat in appearance	4.62	3.69	0.93
Facilities in good condition	4.54	3.08	-1.46
Visually appealing materials	4.27	3.00	-1.27
<i>Reliability</i>	4.08	2.91	-1.17
Services provided at appointed time	4.31	3.00	-1.31
Sincere interest in solving problem	4.46	3.46	-1.00
Service carried out right the first time	3.66	2.42	-1.24
Error free documentation	3.66	2.38	-1.28
Information on service to carry out	4.31	3.27	-1.04

Statements	Expectation	Perception	Service gap
<i>Responsiveness</i>	4.52	3.21	-1.31
Prompt service by staff	4.50	2.88	-1.62
Willingness to help	4.50	3.31	-1.19
Responsive staff	4.58	3.19	-1.39
Information on service changes	4.50	3.46	-1.04
<i>Assurance</i>	4.58	3.54	-1.04
Friendly and courteous staff	4.77	3.73	-1.04
Staff with wide spectrum of knowledge	4.50	3.34	-1.16
Staff are approachable	4.50	3.96	-0.54
Explain problems to hospital staff	4.40	3.51	-0.89
<i>Empathy</i>	4.18	3.13	-1.05
Individualized attention to staff	4.19	3.15	-1.04
Obtain feedback from staff	4.19	3.19	-1.00
24-hour service availability	4.12	4.05	-0.07
Understand specific needs of staff	4.23	3.04	-1.19

As shown in Table 2, two of the highest expectations are in the responsiveness dimension (statements 10 and 12); two statements in the tangibles dimension (statements 2 and 3); and one statements from the assurance dimension which also registers the highest mean value (statement 14).

Table 2: The Five Highest Expectation Statements

Highest Expectation statements	Mean Expectation
Friendly and courteous staff	4.77
Neat in Appearance	4.62
Responsive staff	4.58
Facilities in good condition	4.54
Prompt service	4.50

In Table 3, we can see that four of the lowest expectation statements are all in the empathy dimension, statements 18 to 21. The other lowest expectation statement is statement 1, the up to date facilities which is in the tangible dimension.

Table 3: The Five Lowest Expectations

Lowest Expectation Statements	Mean Expectation
Up to date facilities	4.08
24-hour service availability	4.12
Individualized attention	4.19
Obtain feedback from hospital staff	4.19
Staff should understand specific need	4.23

Table 4 shows that two of the highest perception statements, statements 14 and 16 are in the assurance dimension. Other statements are statement 4, 6, and 16, respectively in the tangibility, reliability, and responsiveness dimensions.

Table 4: The Five Highest Perceptions

<u>Highest Perception Statements</u>	<u>Mean Perception</u>
Staff is approachable	3.96
Friendly and courteous staff	3.73
Neat in appearance	3.69
Sincere interest in solving problems	3.46
Information on service changes	3.46

In Table 5, three of the lowest perception statements are in the reliability dimension, these are statements 5, 7, and 8. The next two lowest are statements 4 and 10, in the tangibility and responsiveness dimensions, respectively.

Table 5: The Five Lowest Perceptions

<u>Lowest Perception Statements</u>	<u>Mean Perception</u>
Error free documentation	2.38
Services carried out right the first time	2.42
Prompt service given	2.88
Visually appealing materials	3.00
Services provided at appointed time	3.00

As Table 6 indicates, two of the largest service gaps (perception – expectation) are in the responsiveness dimension with statement 10 registers the largest difference. The other statement in the same dimension is statement 12. One statement in tangible dimension, and two other largest service gaps are statements 8 and 12, from reliability dimension.

Table 6: The Five Largest Service Gaps

<u>Largest Service Gaps</u>	<u>Mean Difference</u>
Prompt service given by staff	-1.62
Facilities in good conditions	-1.46
Responsive staff	-1.39
Service provided at appointed time	-1.31
Error free documentation	-1.28

Table 7: The Five Smallest Service Gaps

<u>Smallest Service Gaps</u>	<u>Mean Difference</u>
Staff should be approachable	-0.54
Up to date facilities	-0.70
Staff neat in appearance	-0.93
24-hour service availability	-0.97
Sincere interest in solving problem	-1.00

Discussions

The hospital staff 's choices clearly indicate that trust, confidence, courtesy, and competence of the FMS services and personnel are among the most critical dimensions. Since hospital staff are constantly dealing with treating patients, the operability and reliability of hospital facilities are critical to the effectiveness of medical care given to patients. In the urgency of giving medical treatment to patients, little opportunity exists to check and verify equipment and facilities, such that they must always be in readily available operating condition. Making sure this, the party responsible for maintaining the equipment and facilities is totally trusted, depended on, and with full confidence.

The results from the interview confirm. All of the interview participants expected most that the equipment and other hospital facilities are in good and operating condition at all time, round the clock, especially those in the emergency, surgery, and the diagnostic and imaging departments. They consented that, their success and effectiveness in carrying out their duty especially in emergency conditions greatly impinge upon the operational reliability of these equipment and facilities.

This result implies that FMS in delivering its service to the hospital must understand that what are expected from them most are the prompt and responsiveness of its staff to fulfilling needs of the hospital in a very respected and courteous manner. This is consistent with the views of Parasuraman et.al. [7], Oliver [5] and Koch [3]. Hence, to improve the hospital staff's expectations on the quality of service, managers and staff of FMS should focus on functional aspects or statements in the assurance and responsiveness dimensions more than aspects of other dimensions. Any tactical and strategic improvements should also be prioritized on these two dimensions.

Two of the highest perception statements are in the assurance dimension. These responses from the hospital staff show that the FMS staffs are generally assuring, approachable, friendly and courteous. The FMS staff also are perceived to be neat in appearance.

This finding is also in line with the results from the interview conducted. All of the interview participants found that FMS staff were generally assuring, courteous and friendly. This is a thumb-up for the management of FMS that the company is doing well in these dimensions and should keep it that way. However, FMS management should be wary of the lowest perception statements. Three of the lowest perception statements are in the reliability dimension: error free documentation, services carried out right the first time, and services provided at appointed time. As a hospital providing health care services, dealing with life and death of patients, the reliability of its equipment, processes, and services is of paramount importance. FMS is perceived to perform the least in reliability, hence, should immediately act on improving significantly.

One interview participant, a senior technical executive in the diagnostic and imaging department strongly and vocally indicated dissatisfaction with the current performance of the FMS's engineering and maintenance service. There have been several incidences that special equipment in his department were not properly and thoroughly checked and repaired, that it failed while being used only after a few hours the equipment was returned to the department. He was also very much dissatisfied with frequent 'broken promises' of the FMS staff. Delays in attending failed equipment and late deliveries of repaired equipment are frequent. All of the interview participants consented that it is critical for FMS to improve and do it fast.

Conclusions

The findings of this research have demonstrated how the SERVQUAL instrument could help FMS identify the service characteristics that are considered important by the hospital. Furthermore, the use of this instrument may facilitate demonstrating the areas in which FMS is close to meeting the hospital's expectations and the areas that FMS falls short of expectations. In this way FMS can improve its levels of quality and effectiveness of its services.

An analysis of findings clearly indicates that responsiveness, reliability, and assurance are the critical dimensions of service supplier quality. What is more striking to note is that FMS fails to meet expectations in all of the five dimensions of service quality.

Based on these findings, resource allocation decisions should be reevaluated in the light of hospital's staff expectations strategically aligned to meeting and exceeding customer expectations and to have customer-driven continuous improvement programs in place. Planning and coordination are imperatives, and most of all, they require the total commitment of managers, and staff at every level of the organization.

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