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A STUDY ON THE PERCEPTION OF PATIENTS ON SERVICE QUALITY OF AYURVEDIC HOSPITALS IN KERALA USING SERVQUAL MODEL

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ABSTRACT

In today's competitive environment, hospitals are achieving a phenomenal growth especially in the state of Kerala. Ayurvedic hospitals are in huge growth as medical tourism is catching up in Kerala. The tourists find the proper blend of natural beauty with the capabilities in traditional medical sector in the state, making it a prominent place for medical tourism. This study is aimed at analysing how patients perceive the quality of services offered by Ayurvedic hospitals in Kerala using SERVQUAL Model. The study is done analysing the responses in five dimensions namely responsiveness, assurance, tangibility, reliability and empathy. The data was collected on expectations of patients and actual offerings using questionnaires. The sample size is 250 collected through convenient sampling and analysis was done using Likert scale and statistical tests. The patients rank responsiveness, which indicates the willingness to help them as the most important attribute, hospitals need to have.

KEY WORDS: *Ayurveda, SERVQUAL, Perception, Likert Scale, Chi-Square Test*

INTRODUCTION

The healthcare sector in Kerala has been growing at a frenetic pace in the past few years. The windfall began ever since the developed world discovered that it could get quality service for less than half the price. The new thoughts on medical tourism have increased the pace of development.

Kerala is famous for its alternative medical therapies such as Ayurveda, which help to rejuvenate and revitalize the body. What many tourists have now discovered is that Kerala has a pool of trained doctors and nurses and an excellent network of hospitals that offer international standard treatments at very affordable prices. Previously Indians working abroad, such as residents of Kerala working in the Gulf countries, would return to India for medical treatment. Now International patients too have realized the advantages of traveling to Kerala and the medical tourism industry at

hospitals and Ayurvedic centres in Kerala has begun to take off in a big way. Faced with exorbitant fees for procedures such as cardiac surgery, dentistry and cosmetic surgery in their home countries, patients from the West and the Middle East have begun looking at India and Kerala Hospitals in particular.

Indian doctors have established themselves as highly skilled and conscientious caregivers worldwide. Many doctors who have trained or worked abroad have returned to India to work here. Their reputation has led to the growth of the Medical Tourism industry in Hospitals in Kerala. Kerala Travel Tourism offers tour packages that combine medical treatment with a restful holiday in Kerala India. The world-class hospital facilities, pre and post-operative care and pleasant climate make your medical treatment and recovery in Kerala a positive experience.

Kerala is also well placed for the convenience of medical travelers. It is well connected to major air hubs, has some of the good shopping place, accommodation outside the hospital is not costly and tourist vehicles are freely available to move about. Plenty of excursion options are also available.

NEED FOR THE STUDY

Zeithmal (1998) suggests that customers developing a relationship with a service provider allows the provider to gain knowledge of the consumer tastes and preferences, ensures better treatment and encourages more interest in consumer satisfaction. The firms that succeeded in transforming themselves generally shared two key managerial characteristics. First, their managers clearly focused on their core competencies and secondly, they paid attention to their customers.

The quality of service – both technical and functional – is a key ingredient in the success of service organizations. Technical quality in health care is defined primarily on the basis of the technical accuracy of the diagnosis and procedures. Several techniques for measuring technical quality have been proposed and are currently in use in health-care organizations. Information relating to this is not generally available to the public, and remains within the purview of health-care professionals and administrators. Functional quality in contrast, related to the manner of delivery of health care services.

The real experiences of patients with hospitals in receiving various services vary greatly because of the widening gap between what is supposed to be and what actually is. This section delves at great length into the various dimensions of customer service with all the energies.

Through the literature review it was understood that, there were numerous studies that have shown that provision of high – quality services is directly related to increase in profits, market share and cost savings with competitive pressures and the increasing necessity to deliver patient satisfaction, the elements of quality control, quality of service and effectiveness of medical treatment have become vitally important.

The gap between the services promised and services – offered is required to be bridged over. This requires professional excellence. The professionals need to make possible a fair synchronization of performance orientation and employee orientation. This is not possible unless the hospitals regulations are made liberal. The quality of people or employees serving the hospitals needs an over – riding priority.

The studies have proposed that significant variation exists between patient expectation of treatment quality and the perceived service quality of the treatment received, and that this is due to a number factors related to the service quality of treatment delivered.

In view of the above, it is right to mention that in the face of new perception of quality developed by the rapid changes in the health care environment, increasing competitiveness in the health – care industry, and an increasing awareness by patients on satisfaction, the present study provides valuable insights for hospital administrators into the aspects of service quality that are most valued by patients.

This study is done to analyse how the patients perceive the quality of services offered by Ayurvedic hospitals in Kerala using SERVQUAL Model.

OBJECTIVES OF THE STUDY

The objective of the study is to identify the gap between the expectation and perception on performance on the factors affecting service quality at the Ayurvedic hospitals in Kerala.

HYPOTHESES OF THE STUDY

The hypotheses are given below.

- Ho: The gaps between expectations and offerings both on individual attributes and overall dimensions are not significant for the hospitals
- H1: The gaps between expectations and offerings both on individual attributes and overall dimensions are significant for the hospitals

SERVQUAL or RATER framework

SERVQUAL or RATER is a service quality framework. SERVQUAL was developed in the mid eighties by Zeithaml, Parasuram & Berry. SERVQUAL was originally measured on 10 aspects of service quality: reliability, responsiveness, competence, access, courtesy communication, credibility, security, understanding or knowing the customer and tangibles. It measures the gap between customer expectations and experience. By the early nineties the authors had refined the model to the useful acronym RATER (Reliability, Assurance, Tangibles, Empathy and Responsiveness).

SERVQUAL has its detractors and is considered overly complex, subjective and statistically unreliable. The simplified RATER model however is a simple and useful model for qualitatively exploring and assessing customers service experiences and has been used widely by service delivery organizations. It is an efficient model in helping an organization shape up their efforts in bridging the gap between perceived and expected service.

RESEARCH METHODOLOGY

This study follows descriptive research. The population includes the patients at different Ayurvedic hospitals in Kerala. Primary data is collected through administering questionnaires. The questionnaires are developed using five quality dimensions i.e., tangibility, reliability, responsiveness, assurance and empathy. The number of questions is reduced to 20 for reducing the questionnaire size and as a result, improving the response rate. The answers are offered using a 5 point Likert Scale anchored by “1 for strongly agree” to “5 for strongly disagree”. The customers have certain range of expectations bounded by desired service. Apart from these, all important demographic characteristics like age, education, income are taken into considerations which have bearing upon patients’ evaluation of service quality. A reliability test is conducted on the questionnaire using Cronbach Alpha, the value of which is calculated as 0.788. The value of Cronbach Alpha indicated that the questionnaire is reliable. Convenient sampling method is used for selecting the sample. The sample size is 250. Secondary data is collected from journals and web sites. Likert Analysis and Chi square test are used for the analysis. The limitations of the study include the bias among patients and difficulty in getting enough time with the patients.

ANALYSIS AND INTERPRETATIONS

From the data collected, analysis is done on the expectations, opinions on offerings and the gaps between them are calculated for each of the variables. The results are shown in the table No. 1

Table No. 1: Gap Analysis of Expectations and Offerings of Customers

Sl. No.	Attributes	Expectations (E)	Offerings (O)	Gaps (E-O)	% of satisfaction
1	Modern equipments	4.37	3.17	1.2	73
2	Caring supportive staff	4.33	3.33	1	77
3	Cleanliness in the hospital	4.33	2.97	1.36	69
4	The employees are well dressed	4.47	3.07	1.4	69
5	Provide services as promised	4.3	2.97	1.33	69
6	Employees maintain error- free records	4.23	2.73	1.5	65
7	Work of physicians according to patients expectations	4.33	3.43	0.9	79
8	Reliability of supporting staff's service	4.27	3.03	1.24	71
9	Doctor's and other employees are willing to help patients	4.3	3.6	0.7	84
10	The employees are never being too busy to respond to my requests	3.93	3.13	0.8	80
11	Doctors and other employees are offer prompt service to patients	4.2	3.23	0.97	77
12	Helpfulness of Physician	4.57	3.73	0.84	82
13	Able to handle patients problem	4.2	3.17	1.03	75
14	Able to instill confidence in patients	4.2	3.2	1	76
15	Doctors and employees are courteous at all times	4.1	3	1.1	73
16	Doctors have the knowledge to answer patients questions	4.4	3.77	0.63	86
17	Patients are given individual attention	4.2	3	1.2	71
18	Convenient consultation hours	4.1	2.87	1.23	70
19	Deal with patients in a caring fashion	4.17	2.83	1.34	68
20	Care after being discharged	4.27	2.53	1.74	59

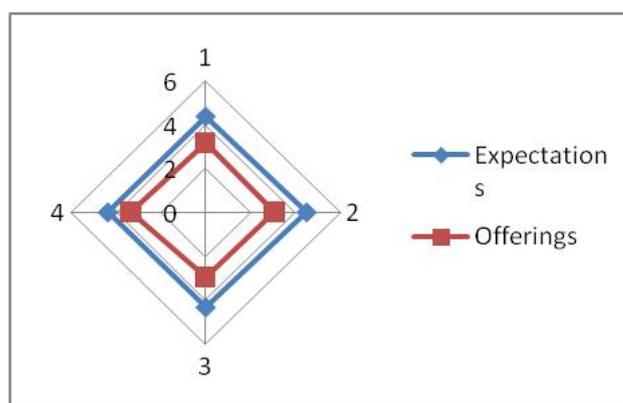
(Source: Primary data)

- It is seen that the percentage level of satisfaction of the patients varies with the attributes. Among all the attributes, the maximum satisfaction is on the Doctors' knowledge to answer patients' questions. There is not as much gaps in services between the customer's expectations and offerings provided by the Hospital.

The gaps in each dimension of the services are represented as figures. Increase in gaps in services lead to the decrease in the satisfaction and vice versa.

Figure No. 1 shows the gaps in services in tangibility.

Figure No. 1: Gaps in Tangibility



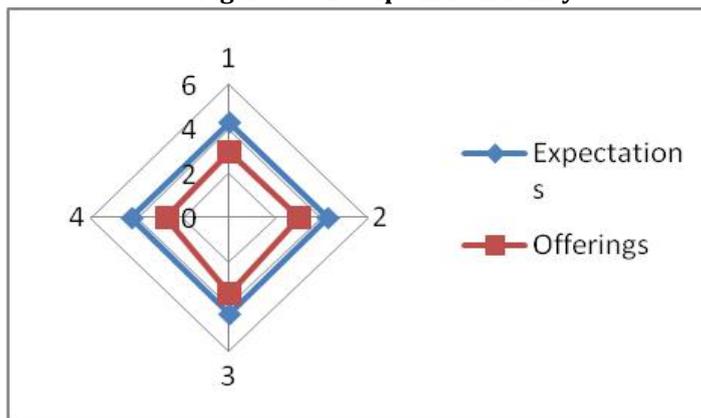
(Source: Primary data)

- The respondents are highly satisfied with the caring supportive staff and the service gaps between its expectations and offerings are mere 1.0. They are less satisfied with the employees' dress codes,

where its gap is 1.40. All the other attributes of Tangibility are good enough to conduct the transactions.

Figure No. 2 shows the gaps in services in reliability.

Figure No. 2: Gaps in Reliability



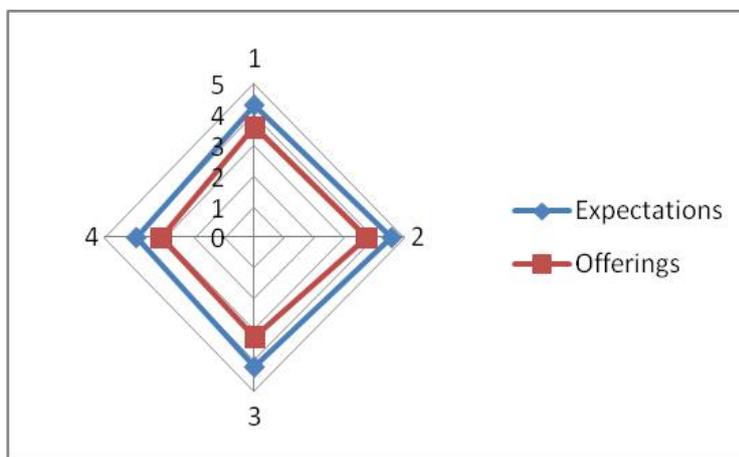
(Source: Primary data)

- The physicians provide prompt service to patients' expectation and the respondents marked its service gap as 0.90. But customers are less satisfied with the employee maintain error free records and they

marked its service gap as 1.50. Hence, maintaining error free records is a must. Immediate steps should be taken for rectifying it. It will retain and attract the customers.

Figure No. 3 shows the gaps in services in reliability.

Figure No. 3: Gaps in Responsiveness



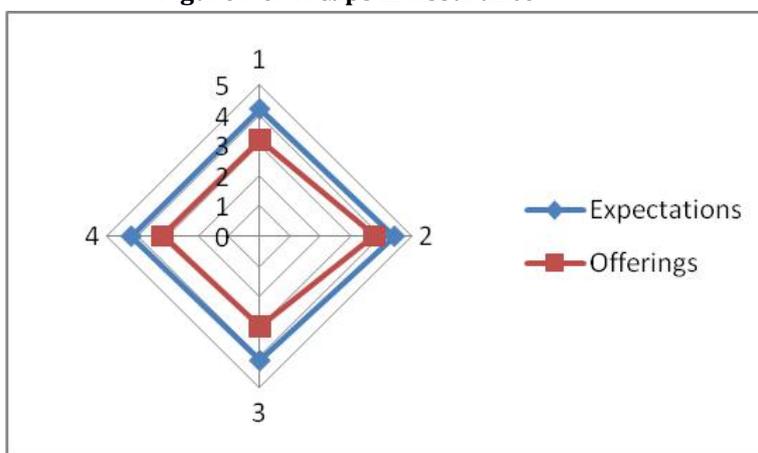
(Source: Primary data)

- The responsiveness of the hospitals to its customers depicted a better result. There is not as much difference between the gaps in service of responsiveness. The customers have full trust on Doctors' and other employees' willingness to help

patients and its service gap is 0.70 which means higher satisfaction. Therefore more patients are interested to consult with this hospital

Figure No. 4 shows the gaps in services in assurance.

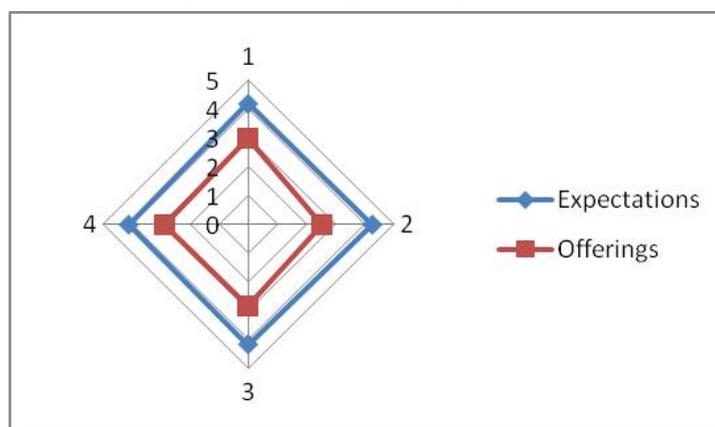
Figure No. 4: Gaps in Assurance



(Source: Primary data)

- The gaps in assurance are second less compared to others. The respondents are satisfied in Doctors Knowledge to answer patients' questions. The gaps in service is only 0.63. But improvement is expected in the rest. Figure No. 5 shows the gaps in services in empathy.

Figure No. 5: Gaps in Empathy



(Source: Primary data)

- The customers have the opinion that, they could not get the trial of care regulating after being discharged and its service gap is 1.74 and % of satisfaction is 59, which is the least in all questions. Hence immediate attention should be given to reduce the gap in service. Analysis is done on the expectations, opinions on offerings and the gaps between them are calculated for each of the dimensions. The results are shown in the table No. 2

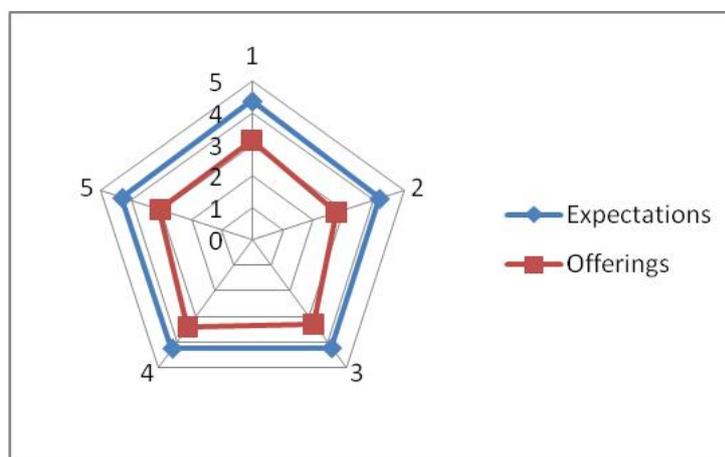
Table No. 2: Gap Analysis of Expectations and Offerings on each dimension

Sl. No.	Dimensions	Expectations (E)	Offerings (O)	Gaps (E-O)	% of Satisfaction
1	Tangibility	4.38	3.14	1.24	72
2	Reliability	4.28	3.04	1.24	71
3	Responsiveness	4.25	3.42	0.83	80
4	Assurance	4.23	3.29	0.94	78
5	Empathy	4.19	2.8	1.39	67

(Source: Primary data)

- It is seen that the percentage level of satisfaction by the customers varies with the dimensions. Among all the dimensions, the maximum satisfaction is on Responsiveness. The service gaps indicated that this is almost same as with Assurance. Empathy scores the lowest. There is not as much gap in services between the customer's expectations and offerings provided by the firm. Increase in gaps in service lead to the decrease in percentage level of satisfaction and vice versa. The gaps on overall dimensions are represented in Figure No. 6

Figure No. 6: Gaps in Five Dimensions of Service Quality



(Source: Primary data)

- There is not as much difference among the gaps in service. The service gap is the lowest in Responsiveness closely followed by Assurance. Empathy is in the fifth position and indicates that the hospital should be able to perform what they offer.

Some demographic characteristics of respondents are also analysed.

- It is understood that patients in the middle income group were satisfied with the hospital.
- Most of the patients are occupied in private jobs. The hospital provides good services to middle income groups so patients are attracted to the hospital.

- It is seen that majority of respondents were married persons. These respondents have more responsibilities compared to the rest unmarried.
- It is evident from the study that male respondents were more in number.

A Chi-square test is conducted to identify whether the gaps between expectations and offerings are significant. The test is done using all the attributes.

The hypotheses are given below.

- Ho: The gaps between expectations and offerings on individual attributes are not significant for the hospitals
- H1: The gaps between expectations and offerings on individual attributes are significant for the hospitals

The calculations are shown in table No. 3

Table No. 3: Calculations for Chi-square test

Sl. No.	Dimensions (Attributes)	Expectations (E)	Offerings (O)	(O - E) ² /E
1	Modern equipments	4.37	3.17	0.33
2	Caring supportive staff	4.33	3.33	0.23
3	Cleanliness in the hospital	4.33	2.97	0.43
4	The employees are well dressed	4.47	3.07	0.44
5	Provide services as promised	4.3	2.97	0.41
6	Employees maintain error- free records	4.23	2.73	0.53
7	Work of physicians according to patients expectations	4.33	3.43	0.19
8	Reliability of supporting staff's service	4.27	3.03	0.36
9	Doctor's and other employees are willing to help patients	4.3	3.6	0.11
10	The employees are never being too busy to respond to my requests	3.93	3.13	0.16
11	Doctors and other employees are offer prompt service to patients	4.2	3.23	0.22
12	Helpfulness of Physician	4.57	3.73	0.15
13	Able to handle patients problem	4.2	3.17	0.25
14	Able to instill confidence in patients	4.2	3.2	0.24
15	Doctors and employees are courteous at all times	4.1	3	0.30
16	Doctors have the knowledge to answer patients questions	4.4	3.77	0.09
17	Patients are given individual attention	4.2	3	0.34
18	Convenient consultation hours	4.1	2.87	0.37
19	Deal with patients in a caring fashion	4.17	2.83	0.43
20	Care after being discharged	4.27	2.53	0.71
	Total			6.30

(Source: Primary data)

- The calculated value of Chi-square is 6.30.
- Degree of freedom for the given data is 19 and the Level of Significance is kept as 10%. The table value is 27.204.
- As the calculated value is lower than the table value, the null hypothesis is accepted. Hence, it is inferred from the test that, the gaps between expectations and offerings on individual attributes are not significant for the hospitals.

Another Chi-square test is conducted to identify whether the gaps between expectations and offerings are significant. The test is done using overall values of dimensions. The hypotheses are given below.

- Ho: The gaps between expectations and offerings on overall dimensions are not significant for the hospitals
- H1: The gaps between expectations and offerings on overall dimensions are significant for the hospitals

The calculations are shown in table No. 4

Table No. 4: Calculations for Chi-square test

Sl. No.	Dimensions	Expectations (E)	Offerings (O)	(O - E) ² /E
1	Tangibility	4.38	3.14	0.35
2	Reliability	4.28	3.04	0.36
3	Responsiveness	4.25	3.42	0.16
4	Assurance	4.23	3.29	0.21
5	Empathy	4.19	2.8	0.46
	Total			1.54

(Source: Primary data)

- The calculated value of Chi-square is 1.54.
- Degree of freedom for the given data is 4 and the Level of Significance is kept as 10%. The table value is 7.779.

As the calculated value is lower than the table value, the null hypothesis is accepted. Hence, it is inferred from the test that, the gaps between expectations and offerings on overall dimensions are not significant for the hospitals.

FINDINGS

Quality is a critical success factor in service industries. The research on measuring service quality has focused primarily on how to meet or exceed the external customer's expectations and views service quality as a measure of how delivered service level matches consumer's expectations. These perspectives can also be applied to the employees of a firm and in this case, other major gaps can be closed in the service quality gaps model.

- On the basis of score calculated for individual dimensions, it is found that customers have ranked the responsiveness dimension of hospitals as first, which entails willingness to help customers and deliver prompt services. 84% of customers are satisfied and feel that the doctors and other employees are willing to help patients. 80% of customers feel that the employees are never being too busy to respond to their requests. 77% of patients are satisfied with the services of Doctors and other employees. 82% are happy with the helpfulness of physician. The hospitals can improve in responsiveness by providing responsible data and details about the patients' treatment history to them.
- Assurance is ranked second by the patients. The patients feel confident and safe due to this factor. It also includes employees being knowledgeable and courteous to them. 75% of patients are satisfied and feel that the AMI's employees are able to handle patients' problems. 76% of patients feel that, the employees are able to instill confidence in patients. 73% satisfied and happy with doctors and employees are courteous to the patients. 86% patients agree that doctors have the knowledge to answer their questions.
- Tangibility is ranked third by the patients. The ambience, which constitutes physical facilities along with employees, is noticed by the patients upon entering the hospital. These create the first impression. 73% of the patients are satisfied with the modern equipments in the hospital. 77% of the patients are happy with the caring of supportive staff. 69% of the patients perceive that the employees of AMI are well dressed and the hospital premises are clean.

- Reliability, indicating the patients' expectation on reliable and error free records for their expenses, is ranked fourth by patients. The reliability is the description of the functional and outcome quality. This implies that the hospital should be able to perform what the patients expect – whether it is the functional quality aspect or the outcome quality aspect. 69% of the patients are satisfied and feel that their promises are followed by the hospitals. 65% of the patients experience that their records are kept accurately. 79% of patients are satisfied with the work of physicians according to their expectations. 71% of the patients are satisfied and feel that the hospital is reliable.
- Attributes under Empathy is ranked fifth by the patients. This factor ensures individual attention to customers, keeping their interest and needs as priority. 71% of the patients feel that the hospitals give individual attention to patients. 70% of the patients believe that, giving time and personal services are important in health care services. The hospitals focus on understanding the requirements of customers and giving them individual attention. 68% of patients are happy with the employees caring them. The hospitals need to ensure that the patients are able to register their complaints. The patients are delighted with the convenience of consultation hours. 59% of the patients are satisfied with the follow up after being discharged.

The findings can be summarized as the following.

The ranking of the dimensions provided by the patients is:

1. Responsiveness: This means willingness to help patients. This can be improved by providing responsible data and detail about treatment history.
2. Assurance: The patients feel confident and safe. This can be improved by updating the current knowledge and well mannered behavior.
3. Tangibility: This constitutes physical facilities like modern equipments laboratory facilities etc., can be improved by updating technological changes in modern equipments.
4. Reliability: Patients expecting reliable reports which can be improved by using computers and internet
5. Empathy: Expect individual attention to patients which can be improved by providing regular training to their employees.

SUGGESTIONS

There are some attributes on which the gaps between expectations and offerings are significant. The level of satisfaction also is low on these attributes. The hospitals need to improve their performances on these attributes.

- The patients need to feel that the hospital is willing to help them. This can be improved by proper communication with the patients including details about diagnosis and treatment.
- They need to improve on providing care to the patients after being discharged. They need to treat them when they visit again.
- The records are to be maintained properly with an error free process. This makes retrieval easier whenever the patients' data is required. This improves transparency also.
- The doctors and employees are to be courteous at all times. The hospital should not compromise on the staff behavior with the patients. A system is to be maintained for looking at this. The hospital can keep a complaint and suggestion box.
- The hospital premises needs to be very clean and the employees are to be well-dressed.
- The patients need to feel that all the promises made to them are fulfilled.
- The patients' convenience also needs to be considered when consultation hours are fixed.
- The supporting staff should be reliable in service so that the hospital can fulfill the offers.
- Individual attention is the key to patients' satisfaction. They need to feel that they are well-attended.
- Searches need to be done on developments in technology and latest equipments are to be purchased and advertised.
- They need to feel that the hospital is able to handle their problem. The hospital needs to instill confidence in patients. They need to feel safe.
- Doctors and other employees need to offer prompt service to patients
- Hospitals should concentrate on relationship management. It can help the hospital to make more business and goodwill among the public.
- It may be fruitful to conduct more awareness among the public through Media.
- The patients should be treated as just, fair and equitable.
- Hospitals should be able to come up with some unique innovative schemes and medical packages to attract some targeted customers.
- The management should ensure that the accessibility, easiness and quickness in their work.
- Provide more training to the employees in order to improve the services to patients.
- Improve the communication between employees, doctors and patients by arranging common programmes.

CONCLUSION

Service industry like hospitals is complex with sheer multiplicity of dimensions of activities. It is necessary for the hospitals to know how their patients perceive their services. The study is aimed at improving the service quality of Ayurvedic hospitals in Kerala. SERVQUAL is used to for

measuring the gaps between patients' expectations and offerings of the hospital. The patients have ranked responsiveness which indicates the willingness to help them as the most important attribute the hospitals need to have. The study helps the hospitals in Kerala to provide more delightful services to their patients.

BIBLIOGRAPHY

1. Anderson E.W and Fornell C (1994), "A customer satisfaction research prospectus". in Rust R.T. and Oliver R.L (Eds), *Service Quality: New directions in theory and practice*, pp 241 – 268.
2. Anton J (1996) *customer relationship management Making hard decisions with Soft numbers*, Prentice – Hall, NJ.
3. Andaleeb, S.S (2001). *Service Quality perceptions and patient satisfaction: A study of Hospitals in a developing country. Social science and medicine* 52, 1359-1370.
4. Brown S W and Swarts T A (1989), "A Gap Analysis of professional Service Quality". *Journal of Marketing*, Vol. 53, No.4, pp. 92-98.
5. Babakus, Emin and w.Glenn Mangold (1992). *Adapting the SERVQUAL Scale to hospital services: an Empirical investigations. Health Service Research* 26(6), 767-780.
6. Babakus E and Boller E W (1992), " An Empirical Assessment of the Servqual Scale". *Journal of business research*, Vol. 24, No.3, pp.253 – 268.
7. Bolton R N and Drew J H (1994), "Linking customer satisfaction to service operation and outcomes" in Rust R.T and Oliver R L (Eds), *Service Quality: New Direction in theory and practice*, pp. 173 – 200.
8. Joseph A. Gliem, Rosemary R. Gliem, *Calculating, Interpreting, and Reporting Cronbach's Alpha Reliability Coefficient for Likert-Type Scales, Presented at the Midwest Research-to-Practice Conference in Adult, Continuing, and Community Education, The Ohio State University, Columbus, OH, October 8-10, 2003.*
9. Joseph F. Hair, Rolph E. Anderson, Ronald L. Tatham, William C. Black, *Multivariate Data Analysis, Pearson Education, New Delhi, 5th Ed., 2006*
10. Kang G D James J and Alexandris K (2002), "Measurement of internal service quality: Application of the Servqual battery to internal Service Quality, *Managing Service Quality*, Vol. 12, No.5, pp 278 – 291.
11. Parasuraman A. Zeithaml V A and Berry LL (1985), "A conceptual Model of Service Quality and its implications for future research", *Journal of Marketing Research*, Vol.49, No.4, pp. 41-50.
12. Parasuraman A Zeithaml V A and Berry L L (1988), "SERVQUAL: A Multi-item scale for measuring consumer perception of service quality," *Journal of Retailing*, Vol.64, No.1 pp.12-40.
13. Philip Kotler (1998), *Marketing Management, Prentice Hall Of India Pvt. (Ltd), 11th Edition*