A Study on Service Quality of a Health Care Organization

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Abstract—The perception which the Healthcare sector has about his functioning is completely different from the other sectors. The view of the quality of services provided by healthcare is concerned about the patient satisfaction about the service provided to them rather than then assessing the kind of service provided to the patient. The end -users view on quality deals with accepted impact when they choose on Medical practitioners. The clients are more interested in knowing the capability of medical practitioners to provide remedy for their illness in an affordable cost. The patients wish to select the hospital has prominent effect on the views on Quality. Patients complete gratification and faithfulness about private healthcare provider plays a significant role in understanding the quality of the service. Additionally, client's inability to measure the clinical standards where each hospital possesses different professional conditions and services like medical specialist knowledge, General physician potential to find out the disease. The Quality of the serviceable aspects are easily judged by the clients when compared to the professional aspects as claimed by experimental studies. Quality is seen and defined as assessment technique in which there is a comparison between his/her requirements and his/her views on service provided by customer. There is numerous advantages in evaluating Quality in Medical sector. It creates awareness among the customer to take prior decision in choosing healthcare provider and medical practitioner. Evaluating the quality also useful for Hospitals.

Keywords—Healthcare, Service Quality, Patient Satisfaction, Hospital Quality, Clinical Standards.

1 Introduction

The perception which the Healthcare sector has about his functioning is completely different from the other sectors[1]. The view of the quality of services provided by healthcare is expressed by Eleuch [2] as it is concerned about the patient satisfaction about the service provided to them rather than then assessing the kind of service provided to the patient. The end –users view on quality deals with accepted impact when they choose on Medical practitioners. The clients are more interested in knowing the capability of medical practitioners to provide remedy for their illness in an affordable cost [3]. The patients wish to select the hospital has prominent effect on the views on

Quality. Bellou and Thanopoulos[4] Patients complete gratification and faithfulness about private healthcare provider plays a significant role in understanding the quality of the service according to Peer and [5]. Additionally, client's inability to measure the clinical standards where each hospital possesses different professional conditions and services like medical specialist knowledge, General physician potential to find out the disease [6]. The Quality of the serviceable aspects are easily judged by the clients when compared to the professional aspects as claimed by experimental studies [6-7]. Quality is seen and defined as assessment technique as per [8] in which there is a comparison between his/her requirements and his/her views on service provided by customer. There are numerous advantages in evaluating Quality in Medical sector. It creates awareness among the customer to take prior decision in choosing healthcare provider and medical practitioner. Evaluating the quality also useful for Hospitals also [9]. When assurance is provided by medical care it creates input or "signals" for the patient to develop a strong old idea about the treatments quality which they are going to get (or not to get) from the healthcare providers. The gauge of the quality in the healthcare includes making on time for consultation, availability of staffs, attractive office, coordination of doctors with patients etc. The patients can use these factors as quality gauge to evaluate the service offered by the healthcare effectively [10]. Patients admitted in the hospital can be gratified by educating medical practitioners, caretakers, and supporting staffs on communal relationship, communicational skills successfully as pointed out by Manimay [11]. The Framework of Quality has been developed with well-grounded record that is SERVQUAL of Parasuraman [12] aimed to make transition in order to evaluate the consumers view on services offered in different industries by the provider. This framework has been implemented in hospitals to estimate the quality in addition to the other service industries.

When requirements are fulfilled (more than expected) it leads o quality of service, and when requirements are not fulfilled it results to disparity in service [12] as per SERVQUAL model. Parasuraman et al. [12-13] proposed extensive principles of quality of service where he compressed into five groups after evaluating its different aspects:

- 1. Perceptible (Amenities, instruments, pleasing staff presence);
- 2. Authenticity (capability to carry out service guaranteed and certainty);
- 3. Cooperation (Ready to aid the consumers and responding with swift service).
- 4. Affirmation (kindness shown by the staff and understanding services provided and their capability to maintain confidential information and being trustworthy); and
- 5. Insight (Soft-hearted, care given individually by the service provider to their consumers).

1.1 Infrastructure

Infrastructure consists of perceptible characteristics of service provided like instruments, physical look of the organisation, indicators, and presence of staffs as per Padma et al [14]. This is specified as human made tangible framework or "service scopes". Especially the service providers of medical care should not only focus on

external appearance but also maintain proper cleanliness. Mostly consumers evaluate the service quality based on perceptible services rather than imperceptible services. The key factor of hospitals infrastructure consists of high-tech equipment's which is used to diagnose the disease and provide appropriate treatment. "Tangibles" are the important aspects of SQ as per SERVQUAL model of Parasuraman et al. [12]. Otani and Kurtz [15] represented tangible amenities and surroundings by assembling the terms like "physical surroundings", "pleasantness of surroundings" in their research. The terminology "clinic infrastructure" with its other different aspects clearly states the ideology of medical care as stated by Rao et al. [16] The important factor recognized in hospitals is "facilities management" as per JCI [17]. The significant factor of SQ also includes physical surroundings as per the reteach conducted by Duggirala [18] on Indian healthcare services. Infrastructure can be evaluated on the tangible amenities in the patients' point of view on quality which is specified by Duggirala et al. [18]. Hygiene, upkeep, and serviceability like rooms for consultation, laboratory rooms, food, cot, patient rooms, operation theatres, guest rooms, ambulance unit, hitech operations, medical shops, and blood reservoir are included in this. There are various researches tried to understand the significant aspect of infrastructure, IN or perceptible aspects in providing service. Consumers pointed the service surroundings are the quality of service concerned with evaluation of quality in various service providing sectors as per Brady and Cronin [19] and Raajpoot [20]. Medical care is help required sector where it aids patients coming with disease, ache, depression, tension; scare [21]. On seeing the distraught and fearful and new surroundings the patient's emotional conditions will get further affected. Pai and Chary [22] stressed how quality of service is affected by health scape. The medical care service providers completely know the factors associated with health scape affecting the quality of service in order to develop a health scape that fulfils consumer's requirement in terms of satisfaction, benefit, protection, confidentiality and assistance [23]. The different aspects comprise of service amities such as laboratory tools, machines, staff looks and symbols or other human made external surroundings as per our paradigm.

1.2 Personnel quality

In India, the quality of people especially qualification of doctors who are serving in government hospital is very bad when compared to the doctors practicing privately according to Das and Hammer [24]. In Lebanon hospitals, caring is the most important factor that deals with the fulfilment of patients' requirement [25]. The service-oriented firm's which has ambitious workers always concentrates in improving their service quality as expressed [26]. Consumer requirement fulfilment and quality of service views are linked straightway with Service Quality. According to Pai and Chary [22] these are the different aspects that involves in assessing such as kindness, competitions, compassionate behaviour, good manners, extrovert nature, employees' visual looks.

1.3 Process of clinical care

"skill" and "ability" are the important element that is associated with professional capability, security, trust ability are the skills of dentist which is stated by Baldwin and Sohal [27]. According to claims of Kang and James [28], SERVQUAL framework which insisted to possess the above quality associated with technology but it is not implemented in it. So, they included the idea of technical quality in their research and also described the term "technical quality" as ability to acquire technical knowledge and with its prompt results. Through the studies carried out at hospitals in Malaysia by Rose et al. [29] who exposed that the influential factor viewed is "technical quality" in public and private hospitals. The features that are associated with medical care is applicable to the other service providers like car services in which the awareness of the skills providing services will not benefit the [30]. As the patients are not aware of the all technical skills that are connected with trustworthy nature of technology, they cannot evaluate the employee's technical knowledge, It is uniform, The communal relationship and the way the treatment is given is used for HSQ judgements by the patients. The communal relationship activities are felt physically by the patients so there is no need to assess the technical aspects.

1.4 Administrative procedures

Patients are unhappy with the hospitals which takes too much of time for detection and treatment of the aliment throughout the countries as per many researches. The important factors that help in getting trouble free treatment for patients are ambulance aids, appointments are obtained easily, admission and discharge process are very simple etc. The hospital staff' or "contact point" should show that they are really concerned about the patient's health by safeguarding them, assuring them about safe treatment, becoming their confident and do anything improve the prominence of the hospital throughout the stay of the patient in the hospital [31]. The clinical evaluation conducted by Pakdil and Harwood [32] on pre-operation procedure in order to know the gratification of the patients found that patients are not satisfied with the time taken for waiting. Hence organized methodologies should be implemented in administration part which will create good hospitalization experience for the patients.

1.5 Social responsibility

"Integrity" is a element in the SQ bank as claimed by Johnston [33] on banking services research. Social responsibility is a essential gauge in service quality which is stressed [34]. Organization which functions as service provider should contribute to social welfare instead of making profit alone. By treating poor and unprivileged people for free ultimately it will create a good reputation about the hospital among the patients which will develop the patients view on SQ. As per Moral and Juridical law explained by Wensing and Elwyn [35] in which the patients must be aware and cooperate in the treatment provided by the health care providers. Most of the patients are interested in decision making process. The main objective is to take informed decision

by the patients which is a cooperation process instead of focusing on the results that is critical. Moral values and patients' choice describe the key factors of implementation. Some examples are participation in making decision is assessed by the terminologies like providing information to select treatment type, knowledge examination, choices and then taking shared decision. The sectors which the hospital can focus to express their SR is through providing medical treatment for nominal fees or by giving free medical treatment to unprivileged people, functioning in rural places, creating orientation programmes for the downtrodden people and others. Good Quality of service can be felt by the consumers if the organization fulfils their business requirements [36]. For example, consumer will be ready to promote the organization if it contributes to the society welfare like charitable activities, developing pollution-free atmosphere and others. The perception of Sureshchandar et al. [37] is same by claiming that the customers will give respect and appreciate the firm which involves in the social responsibility activities.

1.6 Patient Loyalty

The firm is helped by loyalty where they will not meet up with unknown issues in competitive global market [38]. The loyalty of the patients can be described as the assurance given by the patients that they will visit future for taking services [39]. Loyalty of consumers that is customers will also refer other potential clients apart from reusing the services again. Therefore, any business can withstand in a competitive and difficult market when there are loyal clients. There is a confident point that Loyalty is termed as a factor for customer fulfilment and quality of service. Apart from this, both quality of service and client' gratification can be developed by carrying out the functions of TQM activities as stated by many researchers [40]. There are debates by some researches [41-42] where the customer satisfaction will ultimately result into their loyalty. It is just a guess that the patients will refer other people and revisit the hospital and use the services by the health care provider if they are fulfilled with the services provided. The objective of every hospital is to develop loyalty in patients accordingly [43]. The parameter that is dependent on the customer will reuse or not is loyalty. The habit of customer to purchase things is purely based on their previous experience and kind of service provided to them. They are involved in the process of making decision like to continue or discontinue the service provided by them [44]. Loyalty is defined as conditions expressed in order to take part in specified manner. Loyalty is seen as interested to refer, visit again, good word-of-mouth (WOM) objectives. The way one behaves and their motto is categorized into advantages and disadvantages in which good reviews, referring others, being faithful, high payment are the advantageous aspect, and negative reviews, shifting to other firms, criticizing the firm to other sources and less payment are the disadvantageous aspect according to Zeithaml [45]. The powerful factor that tells about the future is evident by good WOM where it deals with making good mannered and well-behaved nature such as creating a good verbal individual communication among the speaker and audience in which the audience always views the service provided and product reputation as a non -profit one [46]. The wish to make more payment is when the customer desire to make higher payment to the service provider when the same services offered by the competitors. Willingness to pay is termed as agent of good values [44]. When a consumer developed a good relationship with the organisation (faithful clients) they will be ready to, make high payment (WPM) for the product and services provided by the organization. Loyalty has a widely influenced by the quality of service and customer's gratification as reported by many researches. As per the results there exists a straight connection of WOM and WPM with the quality of service and customer gratification [47-48].

1.7 Patient satisfaction/attendant satisfaction

The research conducted by Pakdil and Harwood [32] in the assessment of preoperation clinic about gratification of patient implied relationship of customer is achieved if there is a good coordination between the doctor and the patient will eventually lead to patient gratification when compared to any other patient. Patient satisfaction is expected in terms of quality of authorities, process of administration, social activities contribution, precaution measures, kind of treatment provided medically, care provided totally, physical facilities according to the research conducted by Duggirala [18] on Indian hospital services. The research conducted is used to evaluate the factor by using the total gratification of the patient with the services offered. The significance aspect is the satisfaction of the members of patient's family or their friends as pointed out by most of the scholars [49]. Therefore, the present researches aim to evaluate the gratification of helper with the services provided by the hospital. Original consumers to the hospitals are the patients [43] where they are serviced by the provider for the money, they pay for the hospital right away. The mind-set of the patients which is their emotions that may be happiness, frustration, sadness about the services they are offered with and also certain factors in providing the service is known as Patient satisfaction [50]. In Healthcare industry the important and everlasting outcome of quality management is concentrating on the gradual improvement and gratification of customer. The ultimate aim of the hospitals is to achieve customer satisfaction so the expression of gratification on each service offered is must [51]. An efficient facilitator will help us to attain gratification of customer in an elevated way as per TQM theory. This can be explained in other ways that Efficient performance of facilitators are directly associated with patient gratification. The motto of the firm is to achieve consumer gratification. As there are more competitors emerging in healthcare sector the important problem is gratification of consumer as explained [43]. The service provided by the hospitals is the important section in healthcare industry. The important element in determining the victory of hospitals is the gratification of customers with the services they are offered with. Patient gratification is described as decision made by the patient with the treatment and kindness, they are provided by services of hospital have met their expectations or not by Alhashem [52]. So, the patient's gratification is measured by two ways from the definition, the first one is what the patient expects from the service provider before treatment and the second one is what exactly the patient feels after receiving the treatment. When a good quality of service is provided by the hospital there are number of proofs that the patients

are ultimately satisfies within the services they are offered with and they become a regular customers for the hospital also by pointing out the good experience they had in the hospital and refer their relatives and friends. Bringing a new consumer is very expensive so the significant feature is word-of-mouth references of quality services about an organisation is a easy way and acts as a medium for boosting the hospital services. Gratification of patient can be perceived in six aspects [52]that is total service quality, reachable, technically strong, good communal bonding, presence of staff, comfort. Patient gratification is proposed in four different aspects by Kessler and Mylod [41] as clinical care satisfaction, place satisfaction, method and people satisfaction. Three are three different aspects in which the patient satisfaction with quality of service offered by the hospitals can be perceived [53] in terms of hospital infrastructure, responding to the patients, helping them personally. The idea of patient satisfaction as per [54] is explained in three different ways like payment satisfaction, services taken, total satisfaction. Additionally, quality of services that eventually leads to gratification of patient which includes physical facilities, medically aided technology ability, ethnic environment and others as proposed by Grondahl [55]. At last patient gratification is researched by Senarath [56] with respect to the kind of treatment offered with five points like communal relationship, convenience, atmosphere, hygiene and neatness, information provided personally, ability and effectiveness.

1.8 Objectives

The following are the objectives of the study:

- 1. To examine the effect of demographic variables on service quality perception towards a private hospital at Vellore.
- 2. To understand the association of satisfaction across the gender with the service quality of the private hospital at Vellore.
- 3. To identify the influential factors of service quality of the study hospital, Vellore.

1.9 Hypothesis

- 1. There is no difference in the respondents' rank of the dimension infrastructure, clinical care, personal care, admission, social responsibility, image and time for the different age groups.
- 2. There is no difference in the respondents' rank of the dimension infrastructure, clinical care, personal care, admission, social responsibility, image and time for the different level of education.
- 3. There is no association between respondents' gender and their level of satisfaction.

2 Results and Findings

Table 1. Kruska – Walls Test

| | | | | Chi- | Asymp. | | | | Chi- | Asymp. |
|----------------------|--------------------|-----|-----------|--------|--------|--------------------------------|-----|-----------|--------|--------|
| Dimension | Age | N | Mean Rank | | | Education | N | Mean Rank | Square | |
| Infrastructure | Below 21 years | 18 | | 11.76 | 0.02 | Illiterate | 27 | | | 0.00 |
| III do de care | 21-30 years | 53 | 146.42 | 111.70 | 0.02 | Able to read and write | | 110.98 | 100.01 | 0.00 |
| | 31-40 years | 67 | 135.21 | | | School level Education | 73 | | | |
| | 41-50 years | 51 | 179.96 | | | Undergraduate Degree | 95 | | | |
| | 51 years and Above | 114 | 146.07 | | | Post Graduate degree and above | 61 | | | |
| | Total | 303 | | | | Total | 303 | | | |
| ClinicalCare | Below 21 years | 18 | 196.42 | 15.11 | 0.00 | Illiterate | 27 | 74.07 | 101.62 | 0.00 |
| | 21-30 years | 53 | 149.98 | | | Able to read and write | 47 | 104.64 | | |
| | 31-40 years | 67 | 127.30 | | | School level Education | | 117.48 | | |
| | 41-50 years | 51 | 178.60 | | | Undergraduate Degree | 95 | 174.66 | | |
| | 51 years and Above | 114 | 148.54 | | | Post Graduate degree and above | 61 | 229.00 | | |
| | Total | 303 | | | | Total | 303 | | | |
| PersonalCare | Below 21 years | 18 | 202.53 | 14.51 | 0.01 | Illiterate | 27 | 103.72 | 64.71 | 0.00 |
| | 21-30 years | 53 | 128.15 | | | Able to read and write | 47 | 125.65 | | |
| | 31-40 years | 67 | 138.50 | | | School level Education | 73 | 115.13 | | |
| | 41-50 years | 51 | 172.02 | | | Undergraduate Degree | 95 | 163.63 | | |
| | 51 years and Above | 114 | 154.09 | | | Post Graduate degree and above | 61 | 219.68 | | |
| | Total | 303 | | | | Total | 303 | | | |
| Admission | Below 21 years | 18 | 177.56 | 11.24 | 0.02 | Illiterate | 27 | 91.24 | 47.47 | 0.00 |
| | 21-30 years | 53 | 131.93 | | | Able to read and write | 47 | 138.31 | | |
| | 31-40 years | 67 | 132.63 | | | School level Education | 73 | 130.49 | | |
| | 41-50 years | 51 | 172.16 | | | Undergraduate Degree | 95 | 154.08 | | |
| | 51 years and Above | 114 | 159.66 | | | Post Graduate degree and above | 61 | 211.94 | | |
| | Total | 303 | | | | Total | 303 | | | |
| SocialResponsibility | Below 21 years | 18 | 198.06 | 16.40 | 0.00 | Illiterate | 27 | 102.94 | 20.27 | 0.00 |
| | 21-30 years | 53 | 149.73 | | | Able to read and write | 47 | 143.51 | | |
| | 31-40 years | 67 | 130.34 | | | School level Education | 73 | 145.39 | | |
| | 41-50 years | 51 | 180.81 | | | Undergraduate Degree | 95 | 151.77 | | |
| | 51 years and Above | 114 | 151.70 | | | Post Graduate degree and above | 61 | 188.52 | | |
| | Total | 303 | | | | Total | 303 | | | |
| Image | Below 21 years | 18 | 186.92 | 11.18 | 0.02 | Illiterate | 27 | 80.19 | 68.75 | 0.00 |
| | 21-30 years | 53 | 156.55 | | | Able to read and write | 47 | 117.89 | | |
| | 31-40 years | 67 | 136.93 | | | School level Education | 73 | 130.74 | | |
| | 41-50 years | 51 | 172.28 | | | Undergraduate Degree | 95 | 164.06 | | |
| | 51 years and Above | 114 | 144.16 | | | Post Graduate degree and above | 61 | 216.72 | | |
| | Total | 303 | | | | Total | 303 | | | |
| Time | Below 21 years | 18 | 186.22 | 12.54 | 0.01 | Illiterate | 27 | 124.76 | 47.29 | 0.00 |
| | 21-30 years | 53 | 121.84 | | | Able to read and write | 47 | 124.93 | | |
| | 31-40 years | 67 | 142.04 | | | School level Education | 73 | 126.66 | | |
| | 41-50 years | 51 | 161.51 | | | Undergraduate Degree | 95 | 151.73 | | |
| | 51 years and Above | 114 | 162.21 | | | Post Graduate degree and above | 61 | 215.66 | | |
| | Total | 303 | | | | Total | 303 | | | |

From the above table, the use of Kruskal Wallis Test for age shows that there is significant difference in the respondents' mean rank to the dimension infrastructure for their different age groups, as the p-value is less than the significance level of 0.05. The same result could be seen for the other dimensions of clinical care, personal care, admission, social responsibility, image and time for the respondents' different age groups as their p-vale is less than 0.05. The application of Kruskal Wallis Test for educational qualification reveals that there is a highly significant difference in the mean rank of respondents to the dimension's infrastructure, clinical care, personal care, admission, social responsibility, image and time for their different levels of education (p< 0.00).

Table 2. Level of Satisfaction * Gender cross tabulation

| | | | Ger | nder | | | | |
|--------------|--------|--------------------|--------|--------|--------|--------------------|----|----------|
| | | | | | | Pearson | | |
| | | | | | | Chi- | | Asymp. |
| | | | | | | Square | | Sig. (2- |
| | | | Male | Female | Total | Value | df | sided) |
| Level of | Low | Count | 76 | 33 | 109 | 5.652 ^a | 2 | .059 |
| Satisfaction | | % within Gender | 40.0% | 29.2% | 36.0% | | | |
| | Medium | Count | 33 | 16 | 49 | | | |
| | | % within Gender | 17.4% | 14.2% | 16.2% | | | |
| | High | Count | 81 | 64 | 145 | | | |
| | | % within Gender | 42.6% | 56.6% | 47.9% | | | |
| Total | | Count | 190 | 113 | 303 | | | |
| | | % within Gender | 100.0% | 100.0% | 100.0% | | | |

It is evident from the above table that as the p-value 0.059 is higher than the significance level of 0.05, the above null hypothesis is accepted. Linear multiple regression analysis is performed to find the extent of relationship between satisfaction level (X) and predictor variables social responsibility (Y1) and clinical care (Y2).

Table 3. Anovaa

| | | Sum of | | Mean | | | |
|-----------|------------------|---------------|------------|---------------|----------------|-------------------|--|
| Model | | Squares | df | Square | F | Sig. | |
| 1 | Regression | 867.60 | 1 | 867.60 | 1124.60 | .000 ^b | |
| | Residual | 232.21 | 301 | 0.77 | | | |
| | Total | 1099.81 | 302 | | | | |
| 2 | Regression | 874.40 | 2 | 437.20 | 581.87 | .000° | |
| | Residual | 225.41 | 300 | 0.75 | | | |
| | Total | 1099.81 | 302 | | | | |
| a. Deper | ndent Variable: | Total of Sati | isfaction | | | | |
| b. Predic | ctors: (Constant |), Total of S | ocialRespo | onsibility | | | |
| c. Predic | tors: (Constant |), Total of S | ocialRespo | nsibility, To | otal of Clinic | calCare | |

The ANOVA table shows the model is significant as p < 0.05. The regression model is statistically acceptable as large as 80% of variation is caused by the predictors Y1 and Y2.

Table 4. Variables entered / removed *

| Model | Variables Entered | Variables Removed | Method | Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | |
|--|-------------------------------|----------------------|---|--|--|----------|----------------------|-------------------------------|--|
| 1 | Total of SocialResponsibility | | Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100). | 1 | .888ª | 0.79 | 0.79 | 0.88 | |
| 2 | Total of ClinicalCare | | Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100). | 2 | .892 ^b | 0.80 | 0.79 | 0.87 | |
| a. Dependent Variable: Total of Satisfaction | | | | | a. Predictors: (Constant), Total of SocialResponsibility | | | | |
| | | | | b. Predictors: (Constant), Total of SocialResponsibility, Total of ClinicalCare | | | | | |

Table 5. Cofficientsa

| | | | | Standardi | | |
|----------|-----------------------------------|--------------|--------------|-----------|-------|------|
| | | | | zed | | |
| | | | ardized | Coefficie | | |
| | | | Coefficients | | | |
| | | Std. | | | | |
| Model | | В | Error | Beta | t | Sig. |
| 1 | (Constant) | -0.69 | .321 | | -2.14 | .033 |
| | Total of Social Responsibility | 0.65 | .019 | .888 | 33.54 | .000 |
| | | | | | | |
| 2 | (Constant) | -1.21 | .362 | | -3.35 | .001 |
| | Total of Social Responsibility | 0.63 | .020 | .864 | 31.56 | .000 |
| | Total of Clinical Care | 0.05 | .016 | .082 | 3.01 | .003 |
| a. Deper | ndent Variable: Total | of Satisfact | ion | • | • | |

The above table shows of the two independent variables, social responsibility is a stronger predictor as against the predictor clinical care.

2.1 Findings

- 1. Majority of the respondents were male.
- 2. Majority of the respondents belonged to the age group of 51 and above.
- 3. Majority of the respondents had an education of undergraduate level.
- 4. Majority of the respondents were private employees.
- 5. Majority of the respondents had an income of above Rs. 4,00,000.
- 6. Majority of the respondents consulted other departments like Emergency medicine, palliative care, Accident and rehabilitation care, Endocrinology, Psychiatry for treatment.
- 7. The opinion of all the statements in Infrastructure and clinical care is not equal to average level. The lowest mean score for the Variable-Infrastructure is 4.8548 and the highest mean score is 5.9901. The Lowest mean score for the variable-Clinical care is 5.6436 and the highest mean score is 6.0033
- 8. The opinions of all the statements in personal care, admission, social responsibility, image and loyalty are above the average level. The lowest mean score for the Variable-Personal Care is 5.6667 and the highest mean score is 6.1749. The Lowest mean score for the Variable-admission is 4.8053 and the highest mean score is 5.2838. The lowest mean score for the Variable-Social Responsibility is 5.1221 and the highest mean score is 5.7855. The lowest mean score for variable- Image is 5.8779 and the highest score is 5.9010. The lowest mean score for Variable- loyalty is 6.0660 and the highest mean is 6.3465.
- 9. The opinions of majority of statements in Variable- Time are above the average level. The opinions of 50% of the statements in Variable- Satisfaction are above average level and the opinions of 50% of the statements in Variable- Satisfaction are below average level.
- 10. There is no significant difference among age group with respect to Infrastructure.
- 11. There is a significant difference among age group with respect to Clinical Care, Personal Care, Admission, Time Based on Duncan multiple range tests the age group of the respondents below 21 years is significantly different with other age groups.
- 12. There is no significant difference among the age group of the respondents with respect to Social Responsibility.
- 13. There is a significant difference among age group with respect to Image. Based on Duncan multiple range test there is no significant different with other age groups.
- 14. There is a significant difference among the Educational qualification group of the respondents with respect to Infrastructure, Clinical Care, Personal care, Admission, Social Responsibility, Image and Time. Based on Duncan multiple range tests the Educational qualification of the respondents between Post Graduate Degree and above is significantly different with other Educational qualification groups.
- 15. It is concluded that there is no association between gender and level of perception towards service quality. Based on row percentage 42.6% and 56.6% of the male and female respectively has a high level of satisfaction towards the service quality.

- 16. It is concluded that there is no association between gender and level of perception towards service quality. Based on row percentage 37.36% and 29.47% of the male and female has a high level of loyalty towards the service quality.
- 17. Among the seven dimensions, two dimensions say Social Responsibility and Clinical Care were significant predictors of satisfaction.

2.2 Suggestions

- 1. The Suggestions are provided based on the inputs and suggestions received from the respondents.
- 2. Since the level satisfaction of male patients and bystanders who visit the hospital is less than of female patients, it is suggested to tailor the healthcare service in such a way that it satisfies and exceeds the needs and expectation of the male population. Adding infrastructural facilities like waiting area with access to television, internet, and other facilities are sure to please the male population. Along with that, it is very essential to increase the number of male nurses and other staffs in the hospital.
- 3. Since a significant number of patients who visit the hospital are above the age of 51, it is suggested to ensure that the hospital has adequate facilities to satisfy their needs. Senior care departments, well trained and patient staff, clear-cut procedures and simplicity are some of the things that the hospital must ensure to satisfy the patients.
- 4. The hospital should always ensure that it has adequate, up to date and well-maintained infrastructure.
- 5. The hospital should also ensure that it is always involved in activities like social responsibility, to maintain and enhance the image of the hospital.
- 6. It was found that it is the patients of age below 21, who are looking for visual clues the most. It is suggested that the hospital change itself in such a way that it meets and exceeds the expectation of the people belonging to the age group.

3 Conclusion

It can be thus concluded that the various dimensions have a significant impact on Service Quality, which in turn have a great impact on Customer Satisfaction. Among the dimensions, Social Responsibility and Clinical Care were found to be significant predictors of satisfaction. Thus, the hospitals must concentrate on both Social Responsibility and Clinical Care to ensure both Service Quality and Customer Satisfaction. In future, the study can be extended towards other private and government hospitals in the country to find out the exact significant predictors of satisfaction.

4 References

[1] Kritchanchai, D. (2012), A Framework for Healthcare Supply Chain Improvement in Thailand, Operations and Supply Chain Management 5 (2), pp. 103-113. https://doi.org/10.31387/oscm0120080

- [2] Eleuch, A.K. (2011), "Healthcare service quality perception in Japan", International Journal of Health Care Quality Assurance, Vol. 24 No. 6, pp. 417-429. https://doi.org/10.1108/09526861111150680
- [3] Ramsaran-Fowdar, R.R. (2005), "Identifying healthcare quality attributes", Journal of Health and Human Service Administration, Vol. 27 No. 4, Spring, pp. 428-43.
- [4] Bellou, V., and Thanopoulos, J. (2006). Enhancing service quality in a hospital setting. Review of Business, Vol. 27, No. 1, pp. 26-32.
- [5] Peer, M. and Mpinganjira, M. (2011), "Understanding service quality and patient satisfaction in private medical practice: a case study", African Journal of Business Management, Vol. 5 No. 9, pp. 3690-3698.
- [6] Bakar, C., Akgun, S. and Al Assaf, A.F. (2008), "The role of expectations in patients' hospital assessments: a Turkish university hospital example", International Journal of Health Care Quality Assurance, Vol. 21 No. 5, pp. 503-16. https://doi.org/10.1108/09526860810890477
- [7] Devebakan, N. and Aksarayli, M. (2003), "The usage of SERVQUAL scores for the measurement of quality of perceived service in health facilities and implementation of private Altinordu hospital", Journal of Institute of Social Sciences, Vol. 5 No. 1, pp. 38-53.
- [8] Gronroos, C. (1984), "A service quality model and its marketing implications", European Journal of Marketing, Vol. 18 No. 4, pp. 36-44. https://doi.org/10.1108/eum00000000004784
- [9] Strawderman, L. (2005), "Human factors for consideration in quality service metrics for healthcare delivery", unpublished doctoral dissertation, The Pennsylvania State University, University Park, PA.
- [10] Ramsaran-Fowdar, R.R. (2008), "The relative importance of service dimensions in healthcare setting", International Journal of Health Care Quality Assurance, Vol. 21 No. 1, pp. 104-24. https://doi.org/10.1108/09526860810841192
- [11] Manimay, G. (2014), "Measuring patient satisfaction", Leadership in Health Services, Vol. 27 No. 3 pp. 240-254.
- [12] Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1985), A conceptual model of service quality and implications for future research, Journal of Marketing 49, pp. 41-50. https://doi.org/10.1177/002224298504900403
- [13] Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1988), "SERVQUAL: a multiple item scale for measuring consumer perceptions of service quality", Journal of Retailing, Vol. 64 No. 1, pp. 14-40.
- [14] Panchapakesan Padma, Chandrasekharan Rajendran, Prakash Sai Lokachari, (2010) "Service quality and its impact on customer satisfaction in Indian hospitals: Perspectives of patients and their attendants", Benchmarking: An International Journal, Vol. 17 Issue: 6, pp.807-841. https://doi.org/10.1108/14635771011089746
- [15] Otani, K. and Kurz, S. (2004), "The impact of nursing care and other healthcare attributes on hospitalized patient satisfaction and behavioral intentions", Journal of Healthcare Management, Vol. 49, pp. 181-97. https://doi.org/10.1097/00115514-200405000-00008
- [16] Rao, K.D., Peters, D.H. and Bandeen-Roche, K. (2006), "Towards patient-centered health services in India a scale to measure patient perceptions of quality", International Journal for Quality in Healthcare, Vol. 18, pp. 414-21. https://doi.org/10.1093/intqhc/mzl049
- [17] JCI (2007), Joint Commission International Centre for Patient Safety, Joint Commission International, Boulevard, IL.
- [18] Duggirala, M., Rajendran, C. and Anantharaman, R.N. (2008), "Patient-perceived dimensions of total quality service in healthcare", Benchmarking: An International Journal, Vol. 15, pp. 560-83. https://doi.org/10.1108/14635770810903150

- [19] Brady, M.K. and Cronin, J. (2001), "Some new thoughts on conceptualizing perceived service quality: a hierarchical approach", Journal of Marketing, Vol. 65 No. 3, pp. 34-49. https://doi.org/10.1509/jmkg.65.3.34.18334
- [20] Raajpoot, N. (2002), "TANGSERV: a multiple item scale for measuring tangible quality in food service industry", Journal of Foodservice Business Research, Vol. 5 No. 2, pp. 109-127. https://doi.org/10.1300/j369v05n02_08
- [21] Bendapudi, N.M., Berry, L.L., Frey, K.A., Parish, J.T. and Rayburn, W.L. (2006), "Patients perspectives on ideal physician behaviors", Mayo Clinic Proceedings, Vol. 81 No. 3, pp. 338-344. https://doi.org/10.4065/81.3.338
- [22] Pai, Y.P. and Chary, S.T. (2014), "The impact of Healthscope on service quality and behavioural intentions", International Journal of Conceptions on Management and Social Sciences, Vol. 2 No. 2, pp. 18-22.
- [23] Lim J, Lim K, Heinrichs J, Al-Aali K, Aamir A, Qureshi M. The role of hospital service quality in developing the satisfaction of the patients and hospital performance. Management Science Letters. 2018;8(12):1353-62. https://doi.org/10.5267/j.msl.2018.9.004
- [24] Das, J. and Hammer, J. (2007), "Which doctor? Combining vignettes and item-response to measure doctor quality", Journal of Development Economics, Vol. 78, pp. 348-83. https://doi.org/10.1596/1813-9450-3301
- [25] Baalbaki. I, Ahmed, Z.U., Pashtenko, V.H. and Makarem, S. (2008), "Patient satisfaction with healthcare delivery systems", International Journal of Pharmaceutical and Healthcare Marketing, Vol. 2, pp. 47-62. https://doi.org/10.1108/17506120810865424
- [26] Hays, J.M. and Hill, A.V. (2006), "Service guarantee strength: the key to service quality", Journal of Operations Management, Vol. 24 No. 6, pp. 753-764. https://doi.org/10.1016/j.jom.2005.08.003
- [27] Baldwin, A. and Sohal, A. (2003), "Service quality factors and outcomes in dental care", Managing Service Quality, Vol. 13, pp. 207-16. https://doi.org/10.1108/09604520310476472
- [28] Kang, G. and James, J. (2004), "Service quality dimensions: an examination of Gronroos's service quality model", Managing Service Quality, Vol. 14, pp. 266-77. https://doi.org/10.1108/09604520410546806
- [29] Rose, R.C., Uli, J., Abdul, M. and Ng, K.L. (2004), "Hospital service quality: a managerial challenge", International Journal of Health Care Quality Assurance, Vol. 17, pp. 146-59. https://doi.org/10.1108/09526860410532784
- [30] Berry, L.L. and Bendapudi, N. (2007), "Health care: a fertile field for service research", Journal of Service Research, Vol. 10 No. 2, pp. 111-122. https://doi.org/10.1177/1094670507306682
- [31] Boshoff, C. and Gray, B. (2004), "The relationships between service quality, customer satisfaction and buying intentions in the private hospital industry", South African Journal Business Management, Vol. 35, pp. 27-38.
- [32] Pakdil, F. and Harwood, T.M. (2005), "Patient satisfaction in a pre-operative assessment clinic: an analysis using SERVQUAL dimensions", Total Quality Management, Vol. 16, pp. 15-30. https://doi.org/10.1080/1478336042000255622
- [33] Johnston, R. (1997), "Identifying the critical determinants of service quality in retail banking: importance and effect", International Journal of Bank Marketing, Vol. 15, pp. 111-6. https://doi.org/10.1108/02652329710189366
- [34] MBNQA (2007), Malcolm Baldrige National Quality Award, National Institute of Standards Technology, Washington, DC.

- [35] Wensing, M. and Elwyn, G. (2003), "Improving the quality of health care: methods for incorporating patients' views in health care", British Medical Journal, Vol. 326, pp. 877-9. https://doi.org/10.1136/bmj.326.7394.877
- [36] Chiu, H. and Lin, N. (2004), "A service quality measurement derived from a theory of needs", The Service Industries Journal, Vol. 24 No. 1, pp. 187-204. https://doi.org/10.1080/02642060412331301202
- [37] Sureshchandar, G.S., Rajendran, C. and Anantharaman, R.N. (2002), "Determinants of customer perceived service quality: a confirmatory factor analysis approach", Journal of Services Marketing, Vol. 16 No. 2, pp. 9-34. https://doi.org/10.1108/08876040210419398
- [38] Amin, S., Ahmad, U. and Hui, L. (2012), "Factors contributing to customer loyalty towards telecommunication service provider", Procedia-Social and Behavioral Sciences, Vol. 40 No. 1, pp. 282-286. https://doi.org/10.1016/j.sbspro.2012.03.192
- [39] Kessler, D. and Mylod, D. (2011), "Does patient satisfaction affect patient loyalty?", International Journal of Health Care Quality Assurance, Vol. 24 No. 4, pp. 266-273. https://doi.org/10.1108/09526861111125570
- [40] Mortazavi, S., Kazemin, M., Shirazi, A. and Aziz-Abadi, A. (2009), "The relationships between patient satisfaction and loyalty in the private hospital industry", Iranian Journal of Public Health, Vol. 38 No. 3, pp. 60-69.
- [41] Ehsan Sadeh, (2017) "Interrelationships among quality enablers, service quality, patients' satisfaction and loyalty in hospitals", The TQM Journal, Vol. 29 Issue: 1, pp.101-117. https://doi.org/10.1108/tqm-02-2015-0032
- [42] Zeithaml, V.A., Berry, L.L. and Parasuraman, A. (1996), "The behavioural consequences of service quality", Journal of Marketing, Vol. 60 No. 2, pp. 31-46. https://doi.org/10.2307/1251929
- [43] Zeithaml, V.A. (2000), "Service quality, profitability, and the economic worth of customers: what we know and what we need to learn", Journal of the Academy of Marketing Science, Vol. 28 No. 1, pp. 67-85. https://doi.org/10.1177/0092070300281007
- [44] Buttle, F.A. (1998), "Word of mouth: understanding and managing referral marketing", Journal of Strategic Marketing, Vol. 6 No. 3, pp. 241-254. https://doi.org/10.1080/096525498346658
- [45] Ladhari, R. (2008), "Alternative measures of service quality: a review", Managing Service Quality, Vol. 18 No. 1, pp. 65-86. https://doi.org/10.1108/09604520810842849
- [46] Hanzaee, K.H. and Shojaei, J.O. (2011), "The favorable consequence of emotional satisfaction in service encounters: an evidence from tourism", Journal of Basic. Applied Science Research, Vol. 1 No. 11, pp. 2088-2092.
- [47] Strasser, S., Schweikhart, S., Welch, G.E. II and Burge, J.C. (1995), "Satisfaction with medical care: it is easier to please patients than their family members and friends", Journal of Healthcare Marketing, Vol. 15, pp. 34-45.
- [48] Chang, C., Chen, S. and Lan, Y. (2013), "Service quality, trust, and patient satisfaction in interpersonal- based medical service encounters", BMC Health Services Research, Vol. 13 No. 1, pp. 22-32. https://doi.org/10.1186/1472-6963-13-22
- [49] Hasin, M., Seeluangsawat, R. and Shareef, M. (2001), "Statistical measures of customer satisfaction for health care quality assurance: a case study", International Journal of Health Care Quality Assurance, Vol. 14 No. 1, pp. 6-14. https://doi.org/10.1108/09526860110366214
- [50] Alhashem, A., Alquraini, H. and Chowdhury, R. (2011), "Factors influencing patient satisfaction in primary healthcare clinics in Kuwait", International Journal of Health Care Quality Assurance, Vol. 24 No. 3, pp. 249-262. https://doi.org/10.1108/09526861111116688

- [51] Haque, A., Sarwar, A., Yasmin, F. and Nuruzzaman, A. (2012), "The impact of customer perceived service quality on customer satisfaction for Private Health Centre in Malaysia: a structural equation modeling approach", Information Management and Business Review, Vol. 4 No. 5, pp. 257-267.
- [52] Lei, P. and Jolibert, A. (2012), "A three-model comparison of the relationship between quality, satisfaction and loyalty: an empirical study of the Chinese healthcare system", BMC Health Services Research, Vol. 12 No. 1, pp. 436-446. https://doi.org/10.1186/1472-6963-12-436
- [53] Grondahl, V., Hall-Lord, M., Karlsson, I., Appelgren, J. and Wilde-Larsson, B. (2013), "Exploring patient satisfaction predictors in relation to a theoretical model", International Journal of Health Care Quality Assurance, Vol. 26 No. 1, pp. 37-54. https://doi.org/10.1108/09526861311288631
- [54] Senarath, U., Gunawardena, N., Sebastiampillai, B., Senanayake, A., Lekamge, S., Seneviratna, A., Jinadasa, M. and Wijeratne, D. (2013), "Patient satisfaction with nursing care and related hospital services at the national hospital of Sri Lanka", Leadership in Health Services, Vol. 26 No. 1, pp. 63-77. https://doi.org/10.1108/17511871311291732

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