

Patients' Perception Towards Tamil Nadu State Hospitals, India.

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Abstract: Now-a-days, hospitals are realising the importance of quality of services delivery to patients in maintaining strategic position in market as service seekers evaluates the hospital on different determinants while choosing one. Paper attempts to determine perception and expectations through SERVQUAL. Analysis revealed there exists significant gap between perception and expectations forcing hospitals to make improvements across all dimensions of service quality for survival.

Keywords: -Hospitals, Perception, Expectations, Service Quality, Service Seeker, Service Provider.

Classification: Research paper.

1. INTRODUCTION

It was identified in the study that different hospitals though provide same services to patients but quality varies widely from each other [1]. Furthermore, today's patients are more vigilant about types of services, alternatives of service providers and increasing service delivery standards have enhanced service seekers' expectations from service providers. Service seekers' now are evaluating every service more critically based on experiences. Service quality helps in gaining competitive advantage over competitors as it focuses on zero defection and retaining profitable customers, thus empowering strategy makers as a strategy for service differentiation [2]. Success of strategy requires a continuous effort to improve service delivery system on different aspects. Furthermore, a well-defined measurement system is needed to justify the improvement to:

- To satisfy the expectations of the service seekers [3].
- To identify features, attributes and characteristics of products or services and to measure their abilities to satisfy given needs [4].

Measuring of hospitals' service quality must support perceived quality of services delivery instead of objective quality of services, as a result, services are intangible and heterogeneous where consumption and production happens at the same time.

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However, service quality believed to measure how well the services matches respondents' expectations [5], whereas, it is also perceived as a difference between what a service seeker receives and how in what manner they receive it [6]. Service quality is also identified as how consistently and effectively the services delivery matches the expectations of respondents [7]. Therefore, Expectations can be defined as what service seeker must receive from the service provider or service provider should offer to them; whereas, Perceptions stands for service seeker evaluation of service provider. Furthermore, Servqual, a survey research instrument was developed to measure satisfaction level w.r.t. quality of different dimensions of services [8]. Servqual is used to calculate level of perception and expectations on different service characteristics offered by service provider. Services are classified as poor quality when perceived scores are less than expectations scores; and the reverse indicates services as good quality. Perceived quality is the respondents' attitude towards services which is subjective in nature and therefore are highly accurate. It is a result of comparison of perception with expectations on performance [9]. However, perceived quality differs from objective quality [10], [11].

An exploratory research was carried on hospitals of Tamil Nadu to evaluate delivered services quality to patients / service seekers. Analysis would enable the management to manage their resources optimally and to improve operations that have significant impact on customers' perceptions about service quality.

2. METHODOLOGY

2.1 Questionnaire Design

[12] SERVQUAL questionnaire was referred to design questionnaire for pilot study that was further modified to suit hospital services. 20 questionnaires consisting of 22 statements were given to IN patients, OUT patients, employees and doctors of 2 main hospitals of Tamil Nadu for responses. Based on the responses, the existing questionnaire was rephrased and "Accessibility and Affordability" dimension was also added. Finally, questionnaire contained 25 statements and were grouped into six dimensions i.e. Assurance, Accessibility & Affordability, Empathy, Reliability, Responsiveness, and Tangibility. A Likert scale (5-Point) representing "1 - Least Important" to "5 - Most Important", was used for assessment.

2.2 Data Collection

To achieve the purpose of study, exploratory research is conducted using convenience sampling to gather the data. A total of 300 questionnaires was given to Doctors (200) and to specialist clinics (100), who further redistributed to patients received medical treatment in past 3 months, from 10th January 2019 to 10th April 2019. Only 252 full-filled questionnaires were received considering the fact that the hospital authorities were sometimes found reluctant to carry out survey in hospitals premises. Overall, we receive 84% response rate in form of fully filled questionnaires.

2.3 Calculating the SERVQUAL Score

To calculate SERVQUAL (SQ) score of 25 statements for every respondent.

Step-1a: Total the scores obtained for every dimension, and

Step-1b: Divide the total score by number of statements in that dimension.

Step-2a: Add SQ for all respondents, and

Step-2b: Divide the total score by number of service seekers.

This will provide the overall SQ. To calculate Overall Un-weighted SQ

Step-3: Sum SQ of all dimensions, and divide the score by number of dimensions.

To obtain the Weighted SQ

Step-4: Result of Step-1 is multiplied with the assigned weights, given to each dimensions. This provide us the weighted SQ for each dimension.

To obtain Overall Weighted SQ

Step-5: Proceed with Step-2 and Step-3.

The scores were analysed and perceived quality of services was assessed. However, working with mean on ordinal data is not right because intervals used on Likert scale cannot be justified. Furthermore, calculating mean from derived score is perilous. Therefore, Mann - Whitney test is used for hypothesis testing i.e. $H_0 =$ No significant difference exists between patients' perceptions and expectations. To reject the H_0 , observations from both sample set must fall within the region of rejection i.e. $z \leq 1.96$ or ≥ 1.96 with $\alpha = 0.05$ for 2-tailed Z test ($H_1: \mu \neq \mu_0$); otherwise, null hypothesis is accepted.

2.4 Reliability Test

Reliability test was applied on combine score of each dimension of Servqual obtained after summing the scores of every statement under each dimension to identify closeness and connectivity between attributes and combine score. Cronbach's alpha is used to measure consistency between statements under the construct. Acceptance level of consistency exists between different items when Cronbach's alpha value is ≤ 0.7 [8]. When dimensions of Servqual was tested in the study, Cronbach's alpha value ranges from 0.7 to 0.8.

3. FINDINGS & SUGGESTIONS

Considering the basic objective of the study "To identify patient's expectations for hospitals' services", the expectations of service recipients and hospitals performance were analysed. Table-I represents patients expectations, perceptions and service gap of different statements under six dimensions. Test revealed that z value of service dimensions ranges from -2.0 to -2.7; therefore, we rejects H_0 and concludes, a significant difference exists between service recipients' perceptions and expectations i.e. that quality gaps exist within hospitals.

Table-I: Respondents' Perceptions, Expectations, and Service Gaps

S. No.	Statements	Mean Perception (p)	Mean Expectation (e)	Service Gaps (p-e)	Z text
E/P/SQ	Tangibility (T)	3.8	4.2	-0.4	-2.0
E1/P1/SQ1	Latest & maintained facilities & equipment's.	3.9	4.4	-0.5	
E2/P2/SQ2	Clean and cozy setting with sensible directional signs.	3.9	4.2	-0.3	
E3/P3/SQ3	Doctors / Employees ought to be neat and skilled in look.	4.0	4.1	-0.1	
E4/P4/SQ4	Informative brochures concerning service.	3.4	3.7	-0.3	
E5/P5/SQ5	Privacy throughout treatment.	3.7	4.4	-0.7	-2.7
	Reliability (RL)	3.5	4.3	-0.8	
E6/P6/SQ6	Services ought to be provided at appointed time.	3.3	4.2	-0.9	
E7/P7/SQ7	Services ought to be administered right the primary time.	3.7	4.3	-0.6	
E8/P8/SQ8	Doctors / Employees ought to be skilled and competent.	3.7	4.6	-0.9	
E9/P9/SQ9	Error free and quick retrieval of documents.	3.6	4.3	-0.7	-2.3
E10/P10/SQ10	Consistency of charges.	3.5	4.1	-0.6	
	Responsiveness (RS)	3.5	4.4	-0.9	
E11/P11/SQ11	Patients ought to lean prompt services.	3.4	4.3	-0.9	
E12/P12/SQ12	Responsive Doctors / Employees.	3.6	4.5	-0.9	
E13/P13/SQ13	Perspective of Doctors / Employees ought to introduce confidence in patients.	3.7	4.5	-0.8	-2.3
E14/P14/SQ14	Waiting time < than 1 hour.	3.1	4.4	-1.3	
	Assurance (AS)	3.7	4.5	-0.8	
E15/P15/SQ15	Friendly and courteous Doctors / Employees.	3.7	4.3	-0.6	
E16/P16/SQ16	Doctors ought to possess a good spectrum of information.	3.9	4.5	-0.6	
E17/P17/SQ17	Patients ought to be treated with respect.	3.6	4.6	-1.0	-2.2
E18/P18/SQ18	Justify completely medical condition to patients.	3.6	4.6	-1.0	
	Empathy (EM)	3.5	4.2	-0.7	
E19/P19/SQ19	Get feedback from patients.	3.4	4.0	-0.6	
E20/P20/SQ20	24-hour service availableness.	3.5	3.7	-0.2	
E21/P21/SQ21	Doctors / Employees ought to have patients' best interests inside.	3.6	4.5	-0.9	-2.0
E22/P22/SQ22	Doctors / Employees ought to perceive the particular wants of patients.	3.6	4.4	-0.8	
	Accessibility & Affordability (AA)	3.3	3.8	-0.5	
E23/P23/SQ23	Sufficient parking facilities.	3.2	3.4	-0.2	
E24/P24/SQ24	Placement ought to be simply accessible.	3.5	3.9	-0.4	
E25/P25/SQ24	Reasonable services charges.	3.3	4.2	-0.9	

Sources: Data Analysis

Table-II: Highest Expectations

	Statements	Mean Expectation	Dimension
E8	Doctors / Employees ought to be skilled and competent.	4.6	RL
7	Patients ought to be treated with respect.	4.6	AS
E18	Justify completely medical condition to patients.	4.6	AS
E12	Responsive Doctors / Employees.	4.5	RS
E13	Perspective of Doctors / Employees ought to introduce confidence in patients.	4.5	RS
16	Doctors ought to possess a good spectrum of information.	4.5	AS
E21	Doctors / Employees ought to have patients' best interests inside.	4.5	EM

Sources: Table-1

Inferences: 2 out of 7 statements i.e. E18, and E17 represents “AS” and E8 belongs to “RL”; followed by, second highest

expectation statements i.e. E12 and E13 from “RS”, E16 from “AS” and E21 from “EM”. It can be inferred that patients’ shows more concern to “AS” and “RS” dimensions while evaluating hospital services. Result communicates hospital authorities: to be responsive, friendly, courteous, and must treat service seekers with respect and must brief the patients on their medical condition thoroughly (see Table II). Suggestion: In order to improve perception of service seekers for hospitals service quality, administration and medical practitioners should focus on the functionalities rather than on technicalities of services.

Table-III: Lowest Expectations

	Statements	Mean Expectation	Dimension
E23	Sufficient parking facilities.	3.4	AA
E4	Informative services manuals.	3.7	T
E20	24-hour service availableness.	3.7	EM
E24	Placement ought to be simply accessible.	3.9	AA
E19	Get feedback from patients.	4.0	EM

Sources: Table-1

Inferences: 2 out of 5 of statements i.e. E19 and E20, represents “EM”, E23 and E24 from “AA”, and E4 belongs to “T” dimension (see Table III). Suggestion: Though patients have less expectations from hospital management w.r.t. parking facility and availability of 24-hour services, but management must not take this lightly. There always a possibility that service seeker sooner or later may raise expectations on these parameters even. So, maintain the level of service delivery and if possible, improve on it considering increasing traffic and changes in natural and work environment that raise concern for health, now-a-days.

Table-IV: Highest Perceptions

	Statements	ME	D
P3	Doctors / Employees ought to be neat and skilled in look.	4.0	T
P2	Clean and cozy setting with sensible directional signs.	3.9	T
P16	Doctors ought to possess a good spectrum of information.	3.9	AS
P1	Latest & maintained facilities & equipment's.	3.9	T

Sources: Table-1

Note : MD : Mean Expectation, D : Dimension Inferences: 3 out of 4 of statements i.e. P3, P2 and P1 represents “Tangibility” and P16 of “Assurance” dimension (see Table IV). It can be inferred that hospitals’ doctors and employees are neat and maintains professionalism in appearance, and are knowledgeable required to build patients confidence. Also, service seeker perceived hospital have well equipped and sufficient medical facilities, clean environment, and self-explanatory signs to assist them. Suggestion: Administration and medical practitioners must maintain standard of service

delivery for these parameters as service seekers already rated them high on identified parameters.

Table-V: Lowest Perceptions

	Statements	Mean Expectation	Dimension
P14	Waiting time < than 1 hour.	3.1	RS
P23	Sufficient parking facilities.	3.2	AA
P25	Reasonable services charges.	3.3	AA
P6	Services ought to be provided at appointed time.	3.3	RL

Sources: Table-1

Inferences: 2 out of 4 statements, P23 and P25, represents “AA”; P6 and P14 belongs to “RL”, and “RS” dimension (see Table V). Patients and attendants were found unhappy with the long waiting time, and found services charges on higher side. Moreover, they are not getting the delivery of services at appointed time. Furthermore, service seeker rated service provider low on parking facilities, but they themselves do not expect much from management. Suggestion: Serious consideration solicited from management on reducing waiting time and services charges considering India – the 2nd most populated country of world where quality medical facilities are still not easily accessible by ordinary people as and when required, and are expensive too which middle class people cannot afford.

Table-VI: Largest Service Gaps (SQ)

	Statements	MD	D
SQ1 4	Waiting time < than 1 hour.	-1.3	RS
SQ1 8	Justify completely medical condition to patients.	-1.0	AS
SQ1 7	Patients ought to be treated with respect.	-1.0	AS
SQ2 5	Reasonable services charges.	-0.9	AA
SQ6	Services ought to be provided at appointed time.	-0.9	RL
SQ8	Doctors / Employees ought to be skilled and competent.	-0.9	RL
SQ1 1	Patients ought to lean prompt services.	-0.9	RS
SQ1 2	Responsive Doctors / Employees.	-0.9	RS
SQ2 1	Doctors / Employees ought to have patients' best interests inside.	-0.9	EM

Sources: Table-1

Note : MD : Mean Difference, D : Dimension

Table-VII: Least Service Gaps (SQ)

	Statements	MD	D
SQ3	Doctors / Employees ought to be neat and skilled in look.	-0.1	T
SQ20	24-hour service availableness.	-0.2	EM
SQ23	Sufficient parking facilities.	-0.2	AA

SQ4	Informative brochures concerning service.	-0.3	T
SQ2	Clean and cozy setting with sensible directional signs.	-0.3	T

Sources: Table-1

Note : MD : Mean Difference, D : Dimension Largest service gap exists in statement SQ14 of "RS" followed by SQ18 and SQ17 statements of "AS". Remaining statements i.e. SQ25 belongs to "AA", SQ6 and SQ8 to "RL", SQ11 and SQ12 to "RS", and SQ21 to "EM".

Least service gap exists in statement SQ3 of "T" followed by SQ20 and SQ23 statements of "EM", and "AA" respectively. Remaining statements i.e. SQ4 and SQ2 represents "T". Patients' Evaluation of Different Dimensions of Services SERVQUAL is used to determine the relevance of 5 dimensions in influencing perception of service seekers w.r.t. quality of service delivery system. (See Table VIII).

Table-VIII: Comparison of Results with PZB Findings

Statements	D	% FS	MPZBF
1. Ability of Doctors / Employees in providing services to service seekers accurately and on appointed time.	RL	20	32
2. Willingness of Doctors / Employees in providing prompt service and as per service seekers needs.	RS	22.5	23
3. Knowledge level and Courteousness of Doctors / Employees; ability to transfuse confidence within service seekers.	AS	24.1	19
4. Ability of Doctors / Employees to provide care and individualised attention to service seekers.	EM	17.3	17
5. To provide clean and cozy setting with sensible directional signs, availability of latest & maintained facilities & equipment's for service seekers.	T	16.1	11

Sources: Data Analysis

Note :D: Dimension, %FS: %Findings in the study, MPZBF: Mean % PZB Findings From the analysis, only five dimensions of the Servqual were considered to perform Servqual analysis, also known as the PZB findings [13]. Result shows, "AS" (24.1%) identified as the most important dimension in this study as percentage is higher than PZB findings [13] i.e. 19% for other service organisations. "T" (16.1%) appeared to be least important dimension in this study as percentage is again higher than PZB findings [13] i.e. 11%. Percentage of "EM" (17.3%) is close to PZB findings [13] i.e. 17%. Percentage of "RS" (22.5%) and "RL" (20%) were lower than the PZB findings [13] i.e. 23% and 32% respectively. For comparison, PZB findings were compared against findings of this study as:

- "RL" is the most important dimension as per PZB findings in any other services organisation [13], whereas, "AS" identified as the most important dimension in this study.
- "T" is the least important dimension as per PZB findings in any of the services organisation [13], as identified in the study.
- "RS", "AS" and "EM" scored 2nd, 3rd, and 4th as per PZB findings in any of the services organisation [13].
- whereas, "RS", "RL" and "EM" scored 2nd, 3rd, and 4th in this study.

Performance of Hospitals on different dimensions of SERVQUAL

Table-IX and X represents service seeker perception on hospital performance across different dimension of SERVQUAL.

Table-IX

Dimension	Mean Un-weighted SQ Score
RS	-0.9
RL	-0.8
AS	-0.8
EM	-0.7
AA	-0.5
T	-0.4
SQ (Un-Weighted)	-0.7

Sources: Data Analysis

Notes: "RS" have the least un-weighted score i.e. - 0.9 "T" have the highest un-weighted score i.e. - 0. The Un-weighted SQ is - 0.7 According to Table-VIII & IX, "AS", and "RL" are the most important and 3rd important dimensions but has 2nd most -ve Un-weighted SQ; whereas, "RS" – the 2nd important dimension has the most -ve Un-weighted SQ. "EM" – the 4th dimension and "T" – the 5th dimension has better results. This implies that all five dimensions have -ve SQ and none of them exceeds service seeker expectation level.

Table-X represents "AS" & "RS" has the highest -ve Weighted SQ score over others.

Dimension	MUSQS	IW*	MWSQS
T	-0.4	1.5	-0.6
RL	-0.8	0.9	-0.7
RS	-0.9	0.9	-0.8
AS	-0.8	1.1	-0.9
EM	-0.7	0.9	-0.6
AA	-0.5	0.8	-0.4
SQ (Weighted)	-0.7		-0.7

Sources: Data Analysis

Notes: MUSQS : Mean Un-weighted SQ Score, IW* : Importance Weights* & MWSQS :Mean Weighted SQ Score. * Importance weights is calculated asking respondents to allocate 100 points amongst 5 dimensions based on importance they levy on them. "AS" have the lowest weighted score i.e. - 0.9 "AA" have the highest weighted score i.e. - 0.4 The Weighted SQ is - 0.7 The -ve Servqual score (both un-weighted and weighted) highlights there exists scope of improvement in service quality delivery. It is important to note that Weighted Servqual score for "AS" & "RS" are most -ve than that of Un-weighted Servqual scores i.e. hospitals performs poorly on "AS" valued most by patients. Since the analysis discovered that respondents count high on "AS", followed by "RS" and "RL", so hospitals administration must divert their resources to these facets of services delivery. Quality Rating Analysis of Hospital Services

Table-XI shows the perception of respondents towards service quality of hospitals.

Table-XI

Rating	NR	(%)	T	RL	RS	AS	EM	AA	SQ
Very Good	30	11.9	0.4	0.3	0.3	0.0	-0.1	0.4	0.2
Good	122	48.4	-0.1	-0.4	-0.5	-0.3	-0.2	-0.1	-0.3
Fair	78	31	-0.8	-1.3	-1.6	-1.3	-1.2	-1.0	-1.2
Poor	18	7.1	-1.7	-1.8	-2.3	-2.6	-2.1	-2.5	-2.2
Very Poor	4	1.6	-1.9	-2.2	-3.0	-2.9	-2.8	-0.3	-2.2

Sources: Data Analysis

Note : NR : Number of Respondents

Table-XI presents the results are as follows:

30 (11.9%) patients rated services to be "Very Good".

122 (48.4%) patients rated services to be "Good".

78 (31%) patients rated services to be "Fair".

18 (7.1%) patients rated services to be "Poor".

4 (1.6%) patients rated services to be "Very Poor".

"RS" have the least favourable score i.e. -3.0 represents those patients who rated hospital services to be "Very Poor".

"AA" and "T" have the most favourable score i.e. 0.4 represents those patients who rated hospital services to be "Very Good". The worst mean SQ score (- 2.2) represents those respondents who valued services as "Poor" and "Very Poor". Quality of hospital services is below the expectation level of respondents (Table-XI). Respondents who rated the level of quality as "Good" and "Very Good" has favourable SQ score and represents nearly 60% of total respondents. Patients who rated quality of services as "Fair", "Poor", and "Very Poor" has least favourable SQ score and represents nearly 60% of total respondents. Implications of Results Results establishes "AS" to be the most concentrated area for hospitals as patients' expectations from service providers is highest, yet the perceived score is least in the study. Question: Why this happened? Answer: It may be because the patients' expectations ≠ (does not match) the quality of service delivery to satisfy agreed standards. Moreover, though patients' expectations on "AS" and "RS" dimension is on higher side, but the perceived quality of hospital services is below the service seeker expectations level. Therefore, it is inferred that service provider failed to perform upto level of expectations on dimensions which service seeker evaluates critically.

4.CONCLUSION

The study demonstrate the use of SERVQUAL in determining service encounters considered relevant by patients and also to identify those areas where hospitals are doing well or need consideration to fulfill patients' expectations and to improve perception towards hospitals. This will help hospitals to improve quality of service delivery by adjusting resources to identified strategic week services parameters that influences patients' expectations and perceptions greatly. However, it is difficult to locate any specific solution to the findings.

Requirement arises to perform a study on Doctors / Employees of hospitals to identify their perceptions and expectations on hospital services and its delivery process; whereas, must to do aspect by administrators is to enlighten employees with the concept of quality service delivery because they all are the part of hospital management system that contributes in delivering quality services to patients. Need exits to develop a Quality Management framework for hospitals that will assist Doctors / Employees during their actions on improvement. However, reviving quality of service delivery seek support from all three levels of management putting due emphasis on POSDCORB activities i.e. Planning, Organizing, Staffing, Directing, Co-ordination, Reporting, and Budgeting. Above all, commitment of Doctors / Employees solicits for success. The present study has limitation is that the sample has been collected in the Tamil Nadu state only. Moreover, not covered all the hospitals in the state. The study can be conduct in other state of India, by taking huge sample study conducted in the same hospitals. The study can be conduct by comparative between the hospitals/ states in the India.

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