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Perception of Service Quality in Tertiary care center Hospital in Western Odisha - Through SERVQUAL model

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Abstract

This paper emphasizes on finding service quality gaps in a 1006 bedded Government tertiary care Hospital through SERVQUAL model. A sample size of 287 in patients who have stayed in the Hospital for treatment for more than 3 days were selected randomly for the study purpose. The main focus was to find the gaps in expectation and perception of patients regarding service quality of the Hospital. The scope of this research work focuses on examining and measuring service quality in VSS Institute of Medical Sciences & Research, Burla the only tertiary care public hospital in Western Odisha through SERVQUAL methodology. The Major findings of the study were that there is major gap in Reliability Variable followed by Assurance, Empathy, Responsiveness and Tangibles. The paper reflect that the management of the Hospital has to improve up on the services offered to the patients so that perception they receive can be improved.

Keywords: SERVQUAL, Tertiary Care, Expectation, Perception, Reliability, Assurance, Empathy, Responsiveness, Tangibles.

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Introduction

In India Hospital in healthcare sector is broadly divided in to three categories i.e Primary Care Hospitals which are community care Hospitals with 20- 30 beds, Secondary Care Hospitals which are District centered Hospitals with 100- 300 beds and Tertiary care Hospitals with more than 500 beds. The Primary care Hospitals provide basic minimum facilities for treatment while secondary care Hospitals provide few specialties medical care and Tertiary care Hospitals provide mostly Super specialty care along with all other facilities. With opening of the economy many private players are providing Secondary and Tertiary care to the patients through super specialty Hospitals. Patient and their attendants come to the Hospital for treatment and expect a conducive, amicable, friendly atmosphere. But by and large the Patient satisfaction in public hospitals has rarely been given due importance. Of late the Government has stated many quality initiatives in terms of Quality Council of India, National accreditation Board for Healthcare facilities who access the facilities and services on fixed criteria there by standardizing all the Health facilities. So the service quality measurement has been one of the important instruments for organizations to know their customer better and improve their performance in the market. SERVQUAL is one of the methods to measure service quality and was put forwarded by Parasuraman, Zeithamal and Berry in 1985. Parasuraman et al. (1985), had originally identified ten dimensions of service quality which were, at a later stage modified to five dimensions that included 22-items (Parasuraman et al., 1988).

These five dimensions are:-

1. Tangibles: It includes physical facilities, equipment and appearance of personnel.
2. Reliability: It includes ability to perform the services accurately, dependably, Problem solving.
3. Responsiveness: It stresses on willingness to help Patients and provide prompt service to complaint and suggestions.
4. Empathy: It focuses on caring and individualized attention provided to customers.
5. Assurance: It includes employees' knowledge, courtesy and ability to convey trust and confidence.

According to the SERVQUAL model the service quality is measured from a comparison of expectations with perceptions of service quality. This is a user-based approach implying that customers have some expectations with respect to service performance prior to the delivery of service, which is compared with their perceptions of the actual service delivered. The Rationale of the Study lies in the fact that with the rise in level of income and reach of education in India; people are more aware about the services offered to them. Service delivery has been very important issue in healthcare sector. With increase in spending on healthcare infrastructure from Government the service delivery needs to be measured. Service delivery in terms of expectation and service received in government tertiary care hospital in western Odisha is the aim of this study. SERVQUAL is one of the best methods to study the expectation and perception of the customers in terms of infrastructure, reliability, responsiveness, assurance and empathy. The gaps found from study will be implemented to improve the customer satisfaction.

The Scope of this research work focuses on examining and measuring service quality in VSS Institute of Medical Sciences & Research, Burla the only tertiary care public hospital in Western Odisha through SERVQUAL methodology. The SERVQUAL questionnaire of 22 each for expectation and perception of service delivery has been prepared and responses have been collected from sample of 300 patients.

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Research Background

Parasuraman et al (1985) presented SERVQUAL Gap Model with ten dimensions to measure the expected and perception of patients. According to Zeithaml and Bitner (1996), the SERVQUAL model is applicable to the health care sector in all the sections in Thailand. The findings suggested that Assurance was the strongest predictor of service quality followed by empathy, responsiveness, tangibles and reliability respectively. Asubonteng et al (1996) suggested that patients judge functional service quality as the most critical factor in service transactions compared with technical quality due to a lack of knowledge about technical aspects. Many researchers have a similar viewpoint in relation to a patient's perception of quality in the healthcare sector and believe that the variation in culture influences the assessment of quality by customers and service providers. Eleonora Karassavidou et al (2009) researched on Health Care Quality in Greek NHS Hospitals studies patient perception and expectations in four steps and followed SERVQUAL instrument for measuring service quality. It was observed from the study that the patients perceived receiving a rather satisfactory level of health care quality across all SERVQUAL dimensions. However, the results of this study showed that a gap exists between the rating which patients assign to expectations and to perception statements suggesting that there is room for quality improvement initiatives. Figen Ye ilada and Halil Zaim et.al (2010) studied Service Quality and determinants of Customer satisfaction in Turkish Hospitals and found that tangibility, reliability, courtesy and empathy are significant for customer satisfaction, while responsiveness and assurance factors are not that significant. Hussein M. Al-Borie and Amal M. Sheikh Damanhouri (2011) studied on Patients' satisfaction of service quality in Saudi hospitals. Keeping in view public and private hospital service quality, the article showed that sex, education, income and occupation were statistically significant in influencing inpatients' satisfaction. Khanchitpol Yousapronpaiboon, D.B.A. and William C. Johnson, (2013) studied on Out-patient Service Quality Perceptions in Private Thailand Hospitals. The results indicated that SERVQUAL's five dimensions had a significant influence on overall service quality. Responsiveness had most influence; followed by empathy, tangibles, assurance; and finally reliability. S. markovic, et al. studied Service quality and Customer Satisfaction in the Health care Industry -towards health tourism market in Croatia (2014) where they found that there are SERVQUAL gap in all dimensions but the maximum difference in the expectation and perceived quality was that of additional services which include recreational facilities, room services etc. Min Li , Douglas Bruce Lowrie et al (2015) studied on Evaluating patients' perception of service quality at hospitals in nine Chinese cities by use of the SERVQUAL scale. For the five dimensions of the scale, patients in these Hospitals of China reported the most positive perceived service quality. Rezarta Kalaja (2016) examined SERVQUAL model in Albania Hospital through his study; Service quality assessment in health care sector: the case of Durres public hospital and concluded that Tangible Parameter was given the lowest score which indicate that patients wanted up to date equipments for the Hospital. Muhammad Shafiq et.al (2017) examined Service Quality Assessment of Hospitals in Asian Context in Pakistan and demonstrated the need to concentrate on all areas of service quality to satisfy patients also advised health managers to improve scoring of all dimensions. Rula Al-Damen (2017) examined SERVQUAL model in Al-Bashir Hospital in Saudi Arabia through his study Health Care Service Quality and Its Impact on Patient Satisfaction and concluded that Reliability had the most influence, followed by Empathy and Assurance. Tarana Azmi et.al (2017) in their approach to study SERVQUAL model in Bangladesh Hospitals through his research as Measurement of Patient Satisfaction with SERVQUAL Model of Private Hospitals: SEM Approach

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suggested that all the parameters in SERVQUAL model have impact on patient satisfaction also advised that for ensuring better patient satisfaction, variables like: emergency patients, lab-report's accuracy, timely and appointment based patient observation, hygienic environment, and timely report delivery, etc. should be provided. Many studies were conducted in India also to measure Service quality through SERVQUAL method. Annamalai Solayappan, Dr. Jothi Jayakrishnan and Sethu Velmani (2011) studied on Quality Measurement for Hospital Services. The article examined the perception and expectation of patients regarding hospital services by using service quality gap model. The major emphasis of the study was to identify the service quality gap. It was found that there is a huge gap in the hospital services like physical appearance, lack of interest in solving problems and personal care. Dr Markanday Ahuja ; Vipin Mittal and Dr. Seema Mehlawat (2011) researched on Study of Service quality in GOVT/NGO's Eye Hospitals in Haryana with SERVQUAL Model: The purpose of the research paper is to provide review of the SERVQUAL research in measurement of eye care service quality, to obtain information about quality parameters of services provided by GOVT/NGO's eye hospitals in Haryana & to find out as to how much these parameters rate are as per the expectations of the patients. The attributes of reliability and assurance have been identified by respondents to be the most important dimensions of service quality. The responsiveness & tangibility dimensions were found to have negative gap (perception minus expectation), implying that patients expectation of these two dimensions of the eye care services are not met by GOVT/NGO's eye hospitals in Haryana. Dr. Mamta Brahmbhatt; Dr. Narayan Baser And Prof. Nisarg Joshi (2011) researched on adapting the SERVQUAL scale to hospital services: an empirical investigation of patients' perceptions of service quality. Four Out of five dimensions Private hospitals perform better than public hospital in 4 dimensions namely Physical Aspects, Encounter, Process and Policy, while public sector hospitals perform better than private sector only in one dimension namely Reliability. Overall private sector is performing better. Kumar et al. (2012) researched the influence of service quality on patient loyalty through SERVQUAL tool in Apollo hospital of Mysore and found out that dimensions namely tangibility, reliability, responsiveness and empathy are important in retaining the customers. Dinesh Amjeriya, Rakesh Kumar Malviya (2012) presented a case study on Measurement of Service Quality in Healthcare Organization in Ujjain, India.They followed the SERVQUAL model and examined the patient satisfaction in the Healthcare organizations. Dr. Ranajit Chakraborty and Anirban Majumdar (2013) studied on relevance of SERVQUAL Model for Determining Parameters of Quality of Healthcare Service in Indian Context and concluded that SERVQUAL parameters for measuring patient satisfaction are quite relevant in Indian context. Dr. Sadia Samar Ali (2014) examined Service Quality Measurement of Indian Private Hospitals–Using SERVAQUAL framework and had inference that patients indicated best satisfaction in the tangible dimension that hospitals provide ample parking spaces and in the responsiveness dimension as employees always talk truly of hospital matters. A. R. Jaswal and Dr. S. R.Walunj (2017) studied on the topic Antecedents of Service Quality Gaps in Private Hospitals of Ahmednagar: A Critical inquiry into the Hospital attributes through SERVQUAL model and the study revealed that amongst all of the parameters 'reliability', was ranked the top most followed by 'responsiveness'', 'assurance' and 'empathy'. The 'tangibility', parameter was perceived to be least important amongst the entire service dimension.

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Research methodology

The population, sample and sampling

Area of Study

The study was conducted in the VSS Institute of Medical Sciences & Technology, Burla, Sambalpur a tertiary care public facility in Western Odisha having 1006 beds during the month of December 2017-February 2018.

Sampling

The study was conducted in the Veer Surendra Sai Institute of Medical Sciences & Technology a premier tertiary care public hospital in western Odisha. At first, all the hospital wards were listed and among them, sixteen wards were selected. Then, the samples were selected from patients who were hospitalized for more than 48 hours. A total of 300 questionnaires were distributed for responses. Out of 300 questionnaires, 14 were excluded from the study due to incompleteness and 286 responses were analyzed.

For sample size the following formula has been used (Cochran Formula 1963)

$n = n0/ 1+(n0 -1)N$

Where, n = sample size, N = the population size, and n0 = Cochran's sample size recommendation

$n0 = Z2\ pq/e2$

Where e is the desired level of precision (i.e. the margin of error),

p is the (estimated) proportion of the population which has the attribute in question,

q is 1 – p.

z-value is found in a Z table.

The Sample Characteristics has been explained in Table-1

Table 1 Sample Characterization

Variable	**Classification**	**Frequency**	**Percentage (%) (based on the sample size of 286)**
Gender	Male	177	62
	Female	109	38
Age	<18	14	5
	19-30	87	30
	31-50	121	42
	51-70	43	15
	>70	21	8
Education	Illiterate	28	10
	Schooling	127	44
	Undergraduate	76	27

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	Postgraduate	55	19
Occupation	Government Employee	23	8
	Private Employee	71	25
	Business	54	19
	Unorganized sector labor	138	48
Monthly Income	10000-20000	133	47
	20001-30000	74	26
	30001-40000	52	18
	>40000	27	9

Research tools

This study has been based on both primary and secondary data. Primary data were collected by using Parasuraman SERVQUAL questionnaire. This questionnaire consists of a part with demographic questions and another part with 22 multiple choice questions. The questions include four questions related to tangibility, four questions related to responsiveness, five questions related to reliability, four questions related to assurance and five questions related to empathy. The perception of patients of the quality of services is measured in the first section and in the second section, their expectations of quality of services is assessed using Likert scale ranging from strongly disagree (1) to strongly agree (5). The quality gap was defined as the difference of the perception and expectation mean scores.

The Analysis of Data

The different Parameters of the Servqual model are being explained here in terms of Hospital Facilities and data were analyzed as per SERVQUAL scale and derived mean.

Table 2 Servqual Parameters

Dimensions	Parameters
Tangibles – Physical facilities, equipment, and appearance of Hospital and employees	1. Hospital should have up-to-date equipment and instruments. 2. Physical facilities should be visually appealing and accessible 3. Employees should be well dressed and appear neat 4. Materials associated with the service should be visually appealing- signage, parking and other services.
Reliability- To perform the assured service dependably and accurately	5. Should complete the work of the patients by the time which have been promised 6. When patients/ attendants have problems, they should be sympathetic and reassuring

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	7. Work should be dependable 8. Should provide their services at the time they promise 9. Hospitals/clinics should insist on error-free records.
Responsiveness- To help the patients and provide prompt service	10. Should tell patients/ attendants when services will be performed 11. Should provide prompt service to the patients 12. Staffs should be always willing to help the patients 13. Should not be busy to deny the required service to the patients/ attendants
Empathy- Caring, individualized attention by the Hospital to its patients	14. Hospital should give patients/ attendants individual attention 15. Employees should give customers personal attention 16. Employees should know what are the needs of their patients/ attendants 17. Should have patients/ attendants best interests at heart 18. Should have operating hours convenient to all patients/ attendants.
Assurance- Courtesy, knowledge, ability of Doctors, Employees to inspire trust and confidence among patients and their attendants.	19. Patients/ attendants should be able to trust the employees 20. Patients/ attendants should feel safe in the hands of the Doctors and employees 21. The Doctors and employees should be polite and constantly courteous. 22. Employees should have the knowledge to answer patients' questions.

Research Findings

Results

The responses were received from the patients and were analyzed through their mean scores. The expected and perceived mean scores were tabulated and their Gap was found out. The gaps were ranked in ascending order.

Table 3 Mean of Variables

Sl No	DIMENSION	MEAN (E)	MEAN (P)	GAP (E-P)	RANK
	Tangible	**4.57**	**3.83**	**0.74**	**1**
1	ET1 - up-to-date equipment and instruments.	4.82	3.54	1.28	17
2	ET2- visually appealing and accessible	4.31	3.97	0.34	1

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3	ET3- well dressed and neat	4.31	3.75	0.56	4
4	ET4- signage	4.82	4.07	0.75	9
	Reliability	**4.51**	**3.32**	**1.19**	**5**
5	ER5- In time completion of service	4.62	2.89	1.73	21
6	ER6- sympathetic and reassuring	4.59	3.35	1.24	16
7	ER7- dependable	4.29	3.47	0.82	10
8	ER8- services at the time they promise	4.62	2.84	1.78	22
9	ER9- error-free records	4.44	4.06	0.38	2
	Responsiveness	**4.47**	**3.60**	**0.87**	**2**
10	ER10- when services will be performed	4.34	3.75	0.59	5
11	ER11- prompt service to the patients	4.46	2.81	1.65	20
12	ER12- willing to help the patients	4.66	4.13	0.53	3
13	ER13- deny the required service to the patients/ attendants	4.43	3.71	0.72	8
	Empathy	**4.53**	**3.52**	**1.01**	**3**
14	EE14- hospital should give patients/ attendants individual attention	4.29	2.84	1.45	19
15	EE15- employees should give customers personal attention	4.26	2.93	1.33	18
16	EE16- needs of their patients/ attendants	4.57	3.96	0.61	6
17	EE17- patients/ attendants best interests at heart	4.74	3.70	1.04	14
18	EE18- operating hours convenient to all patients	4.79	4.16	0.63	7
	Assurance	**4.61**	**3.58**	**1.03**	**4**
19	EA19- able to trust the employees	4.62	3.63	0.99	12
20	EA20- feel safe in the hands of the Doctors and employees	4.78	3.83	0.95	11
21	EA21- polite and constantly courteous	4.75	3.62	1.13	15
22	EA22- knowledge to answer patients' questions	4.27	3.24	1.03	13

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Conclusion

After going through patients' expectation and perception of services provided by the Hospital through Servqual model it was found that there was a higher expectation towards services as compared to the perception received during their stay at the hospital. The average score of expectation of services quality was 4.54/5 compared to the perceived service quality of 3.57/5 in the Servqual model. The above case suggests that the present hospital facilities were not up to the standard of expectation of patients. Further it was found that the highest gap in the service quality was of the Reliability variable (1.19) compared to other variables Assurance (1.03), Empathy (1.01), Responsiveness (0.87) and Tangible (0.74). Among the sub variables the Gap was highest in factor 8 under Reliability variable which was related timely availability of the services as promised (1.78) which indicate that the patients do not get the services on time which created dissatisfaction. It was followed by sub-factor 5 (gap 1.73) and sub factor 11 (gap1.65) variable which were also related to the timely provision of services. The other major gaps include sub factor 14 (gap 1.45), sub factor 15 (gap 1.33) under Empathy variable which were related to Hospital and Employee individual attention to the patients. Also the sub factor 1 (gap 1.28) under Tangible variable indicated that patient wanted up to date equipments and instruments which was not provided by the Hospital. It was observed that the patients expected good facility in terms of modern equipments & instruments, timely availability of services, individual attention, politeness of the Doctors and Employees, helpful staffs and well visible signage in the hospital. While analyzing the above services through Servqual model it was found that the Reliability variable as the most important followed by Assurance, Empathy, Responsiveness and Tangible variables in the VSS Institute of Medical Sciences and Technology, Burla, Sambalpur. This study examined the service quality offered to the patients in terms of their expectation and perceived services they have received from the Hospital. It was found that there is a hugh gap in the expected and perceived services under Reliability, Assurance and Empathy variables. The management of the Institute must focus on the timely availability of the services with more empathy from Doctors and employees and with availability of modern equipments and instruments at the facility.

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