Research Article

Assessment of patient's satisfaction regarding the service quality of a rural hospital of Burdwan district, West Bengal, India

Prosenjit Naskar*, Somnath Naskar, Sima Roy

Department of Community Medicine, Burdwan Medical College and Hospital, West Bengal, India

*Correspondence:
Dr. Prosenjit Naskar,
E-mail: prosenjit.703@gmail.com

ABSTRACT

Background: Patients satisfaction is the basis of quality healthcare services. To improve quality of healthcare it is most important to obtain feedback from patients. Patients' satisfaction or service quality mostly depends on patients' expectation. This study was conducted to identify some important areas where improvement can be done by knowing patients expectation, perception and their gaps.

Methods: A cross-sectional study was conducted among patients aged >18 years. Total 350 patients from OPD by consecutive sampling and 309 patients from IPD by complete enumeration was taken from a rural hospital of Burdwan district. A modified form of SERVQUAL questionnaires was used.

Results: Service quality gaps were identified across all the five dimensions as well as all the 22 items of the survey instrument (except one item). All those gaps were statistically significant (Except two items). It was identified that highest service quality gap exist against the item no. 8 (Provide its services at the time) for OPD and item no. 20 (Readiness for personal attention) for IPD services.

Conclusions: This study measured service quality of a hospital in the context of patients' perceptions and expectations and identified some areas of improvement while catering health services. The findings can help the healthcare provider to plan conceptually in improving health care delivery systems.

Keywords: Expectation, Perception, Service quality, SERVQUAL, Patients' satisfaction

INTRODUCTION

Patient satisfaction and quality of service is a multidimensional aspect. To improve quality of health services it is most important to obtain feedback from the consumer be it patient or patient party. In every aspect satisfaction depends mostly on the expectation. So to measure quality of services in a hospital it is important to measure patients or patient party's expectation and perception and find out their knowledge so as to evaluate quality of services.

Quality in health services entails two dimensions: technical quality (outcome quality) and functional quality (process quality). Technical quality focuses on the accuracy of medical diagnoses and procedures whereas functional quality refers to the way in which health care services are delivered to patients. Because most of patients lack the required knowledge for evaluating the technical quality of the services, their evaluation of quality is based on the medical care process.[1]

It is very difficult to measure patients' satisfaction or quality of service as a whole or in every aspect, as quality of services is multidimensional. There are different methods for determining the patients' expectations and service quality but among all of them SERVQUAL model, developed by Parasuraman et al is one of the best models for assessment of patients' expectations,

perceptions and quality of the services. SERVQUAL is based on the idea that the quality is a subjective evaluation of the customer, as the service is not a physical item but an experience.[1]

Earlier, service quality was measured by difference between consumer perception and expectation on the basis of ten dimensions which includes; reliability, tangibility, communication, security, credibility, competence, understanding, access, understanding/knowing customers, responsiveness. Further this model was refined by parasuraman, berry and service quality can be measured on the basis of five dimensions; reliability, tangible, responsiveness, assurance and empathy and these five dimensions were further assessed by 22 items.[2]

In India few studies have been done regarding quality of health care services and patient satisfaction but in West Bengal there is dearth of knowledge regarding patient satisfaction and quality of health service inrural hospital.[3,4,6] Government health sector in West Bengal is the main source of health service among the people. With this background this study was conducted to measure the patient satisfaction and patients' perception and also the gap between expectation and perception regarding some important aspect of hospital services to identify the aspects of health facilities where we can improve.

METHODS

The present study was a cross sectional type of observational study done among patients of out-patient department (OPD) and in patient department of Chittaranjan Rural Hospital, Bhatar, Burdwan, West Bengal, during 15/09/15-15/12/15.

Inclusion criterion

- Patient admitted in the hospital for more than 24 hours (in case of indoor patient).

- Patients above the age of 18 years.

Exclusion criterion

- OPD patients requiringadmission.

- Patients who were referred from this hospital.

- Those who were very sick.

Sample size for OPD was calculated by using formula z^2pq/l^2, where z=1. 96 (95% confidence level), p=50% (percentages of patient satisfaction), q= 1-p, l= 15% (relative precision) and considering the design effect 2, estimated sample size was (171 x 2=) 342. Consecutive sampling was done to attain the required sample size. For IPD complete enumeration of discharged patients was done during the study period and it came out to be 175. Modified SERVEQUAL questionnaire was used to assess patients' satisfaction.[1] For translation retranslation validity the questionnaire was initially translated from English to Bengali and then back- translated to English from Bengali. Then, prior to data collection the questionnaire was piloted through interviews with a sample of 15 patients. The corrections mainly concerned the phrasing of the questions in Bengali.

After taking written consent and explaining the purpose of the study, the questionnaire was administered to the study subjects. For those patients who were unable to fill up the questionnaire, it was filled up with the help of the investigator or his or her close relative. Patients were assured about full confidentiality and anonymity of the survey. Statistical analysis was done by descriptive and inferential statistics.

RESULTS

A five-point Likert scale was used, ranging from strongly disagree (1) to strongly agree (5) to assess the level of patients' expectation and perception of service quality. The surveyed questionnaires were collected and coded in MS Excel database and analysed by using the SPSS statistical package, version 20.0. Descriptive statistics were performed on the socio-demographic data. The coefficient alpha values were observed to be consistently high, ranging from 0.707 to 0.760 indicating high internal consistency among items within the SERVQUAL instrument.

Result of outpatient department

Out-patient department

Among 350 patients from out-patient department 52.57 % were male and 65.14% were Hindu. 18.57% were illiterate. Among the male patients 50% were unskilled worker and 46.4% of female were homemaker. As per modified BG Prasad scale 64.57% people fall under socioeconomic class V.

The Expectation values were consistently high for all the items. The highest expectation value was observed against the item no. 7 (Getting things right the first time) and the lowest expectation score was for item no.4 (Visually appealing materials). In the similar way highest and lowest perception score was found against the item no. 19 (Convenient working hours) and 20 (Readiness for personal attention) (Table 1 and 3).

Service quality gaps (E-P) have been illustrated in Tables 1. It is showing that quality gaps exist along all 22 items of the survey instrument except item no. 19. Gap across all the item is statistically significant at < 0.001 value except item no.17 (Adequate knowledge) and 19. It was found that highest service quality gap exist against the question no. 7 (Gets things right the first time).

As regard to SERVQUAL important score it was found that Reliability dimension (24.54) is the most priority area and Empathy dimension (15.50) is the least priority area among all five SERVQUAL dimension (Table 2).

Table 1: Item score analysis for expectations and perceptions (mean scores for patients' expectations, perceptions and quality gaps and p value).

Items	Expectation(e) Mean ± sd	Perception(p) Mean ± sd	Gap (p-e)	P value Sig.(two tail)
Tangibles				
Modern equipment	3.75±1.159	2.53±1.062	1.22	.000
Physical facilities	3.69±1.098	2.61±1.040	1.08	.000
Clean and hygienic appearance	3.95±.906	3.41±1.173	0.54	.000
Visually appealing materials	3.51±1.037	2.63±.932	0.88	.000
Average	3.73	2.80	0.93	
Reliability				
Full fill promises within time	4.38±.716	3.35±1.112	1.03	.000
Sympathetic attendance to patients	4.41±.644	3.40±1.084	1.01	.000
Gets things right the first time	4.78±.453	2.98±1.226	1.80	.000
Provides its services at the time	4.27±.778	3.38±1.203	0.89	.000
Accurate records	3.82±.870	3.31±.935	0.51	.000
Average	4.33	3.28	1.05	
Responsiveness				
Information before performing any services/procedure	3.75±.977	2.83±.960	0.92	.000
Prompt service	4.69±.497	3.15±1.325	1.54	.000
Staff always willing to help	4.43±.693	3.50±1.109	0.93	.000
Prompt response to any request	4.75±.474	3.37±1.288	1.38	.000
Average	4.40	3.21	1.19	
Assurance				
Can trust staff	3.99±.845	3.09±1.203	0.90	.000
Feel safe	4.14±.789	3.35±1.065	0.79	.000
Consistently courteous by hospital personnel's	4.60±.610	3.21±.1.325	1.39	.000
Adequate knowledge	4.10±.837	3.97±.984	0.13	.071
Average	4.20	3.40	0.80	
Empathy				
Individual attention to patients	3.80 ±1.026	2.59±1.039	1.21	.000
Convenient working hours	4.35±.708	4.42±.814	- 0.07	.172
Readiness for personal attention	3.63±1.220	1.97±.960	1.66	.000
Staff have best interests of the patients in their heart	3.96±1.041	3.04±1.167	0.92	.000
Staff aware of the needs of the patients	4.31 ±.723	2.88±1.160	1.43	.000
Average	4.01	2.98	1.06	
Total average expectation	4.13	3.13	1.00	

Table 2: SERVQUAL importance scores.

SERVQUAL Dimension	Importance weight
Average tangible	15.87
Average reliability	24.54
Average responsiveness	23.84
Average assurance	20.10
Average empathy	15.50
TOTAL	≈100

Table 3: Extreme values of expectation, perception and expectations perceptions gap.

The five statements with the highest expectation scores	
Items	Mean score
7. Gets things right the first time	4.78
13. Prompt response to any request	4.75
11. Prompt service	4.69
16. Consistently courteous by hospital personnel's	4.60
12. Staff always willing to help	4.43
The five statements with the lowest expectation scores	
Items	Mean score
4. Visually appealing materials	3.51
20. Readiness for personal attention	3.63
2. Physical facilities	3.69
1,10. Modern equipment, Information before performing any services/procedure	3.75
18. Individual attention to patients	3.80
The five statements with the highest perception scores	
Items	Mean score
19. Convenient working hours	4.42
17. Adequate knowledge	3.97
12. Staff always willing to help	3.50
3. Clean and hygienic appearance	3.41
6.Sympathetic attendance to patients	3.40
The five statements with the lowest perception scores	
Items	Mean score
20. Readiness for personal attention	1.97
1. Modern equipment	2.53
18. Individual attention to patients	2.59
2. Physical facilities	2.61
3. Clean and hygienic appearance	2.63
The five statements with the highest quality gap scores	
Items	Mean score
7. Gets things right the first time	1.80
20. Readiness for personal attention	1.66
11. Prompt service	1.54
22. Staff aware of the needs of the patients	1.43
16. Consistently courteous by hospital personnel's	1.39

In-patient department

On the other hand among 309 patients from in patient department 43.7% were male and 65.04% were hindu. 19.41% were illiterate. Among the male patients 51.9% were unskilled worker and 48.9% of female were homemaker. As per modified BG Prasad scale 71.2 % people fall under socioeconomic scale class V.

The expectation values were consistently high for all the items same like out-patient department. The highest expectation value was observed against the item no. 7 (Gets things right the first time) and lowest expectation score belongs to item no.4 (Visually appealing materials).

In the similar way highest and lowest perception score was found against the item no. 19 (Convenient working hours) and 20 (Readiness for personal attention) (Table 4 and 6).

As can be seen from Table 4, quality gaps exist along all 22 item of the survey instrument except item no. 19. Gap across all the item is statistically significant at <0.001 value except item no.17 (Adequate knowledge) and 19.

It is found that highest service quality gap exist against the question no. 20 (Readiness for personal attention) (Table 6).

As regard to SERVQUAL important score it was found that Reliability dimension (26.37) is the most priority and Tangible dimension (12.65) is the least priority area among all five SERVQUAL dimension (Table 5).

Table 4: Item score analysis for expectations and perceptions (mean scores for patients' expectations, perceptions and quality gaps and p value).

Items	Expectation (E) Mean±SD	Perception(P) Mean±SD	Gap (P-E)	P value Sig.(2 tailed)
Tangibles				
Modern equipment	4.21±.845	2.44±.970	1.77	.000
Physical facilities	3.67±1.114	2.60±1.035	1.07	.000
Clean and hygienic appearance	3.94±.906	3.41±1.169	0.53	.000
Visually appealing materials	3.50±1.024	2.50±.859	1.00	.000
Average	3.83	2.74	1.09	
Reliability				
Full fill promises within time	4.37±.717	3.33±1.111	1.04	.000
Sympathetic attendance to patients	4.62±.492	3.29±1.040	1.33	.000
Gets things right the first time	4.81±.404	2.92±1.180	1.89	.000
provides its services at the time	4.26±.779	3.52±1.150	0.74	.000
Accurate records	3.81±.872	3.31±.940	0.50	.000
Average	4.37	3.27	1.10	
Responsiveness				
Information before performing any services/procedure	3.75±.973	3.23±1.012	0.52	.000
prompt service	4.73±.458	2.85±1.190	1.88	.000
Staff always willing to help	4.50 .606	3.38±1.124	1.12	.000
Prompt response to any request	4.77±.453	3.54±1.194	1.23	.000
Average	4.44	3.25	1.19	
Assurance				
Can trust staff	4.10±.816	2.95±1.065	1.15	.000
Feel safe	4.25±.725	3.27±1.058	0.98	.000
Consistently courteous by hospital personnel's	4.63±.546	3.17±1.298	1.46	.000
Adequate knowledge	4.23±.743	4.07±.940	0.16	.035
Average	4.30	3.37	0.94	
Empathy				
Individual attention to patients	3.91±.937	2.48±.732	1.43	.000
Convenient working hours	4.40±.650	4.41±.815	-0.01	.863
Readiness for personal attention	4.02±.901	1.97±.960	2.05	.000
Staff have best interests of the patients in their heart	4.19±.824	2.91±1.085	1.28	.000
Staff aware of the needs of the patients	4.21±.795	2.89±1.152	1.32	.000
Average	4.15	2.93	1.22	
Total average expectation	4.22	3.11	1.11	

Table 5: SERVQUAL importance scores.

SERVQUAL dimension	Importance weight
Average Tangible	12.65
Average Reliability	26.37
Average Responsiveness	24.87
Average Assurance	19.79
Average Empathy	16.32
Total	=100

Table 6: Extreme values of expectation, perception and expectations perceptions gap.

The five statements with the highest expectation scores	
Items	Mean score
7. Gets things right the first time	4.81
13. Prompt response to any request	4.77
11. prompt service	4.73
16. Consistently courteous by hospital personnel's	4.63
6. Sympathetic attendance to patients	4.62
The five statements with the lowest expectation scores	
Items	Mean score
4. Visually appealing materials	3.50
2. Physical facilities	3.67
9. Accurate records	3.81
18. Individual attention to patients	3.91
3. Clean and hygienic appearance	3.94
The five statements with the highest perception scores	
Items	Mean score
19. Convenient working hours	4.41
17. Adequate knowledge	4.07
13. Prompt response to any request	3.54
8. provides its services at the time	3.52
3. Clean and hygienic appearance	3.41
The five statements with the lowest perception scores	
Items	Mean score
20. Readiness for personal attention	1.97
1. Modern equipment	2.44
18. Individual attention to patients	2.48
4. Visually appealing materials	2.50
2. Physical facilities	2.60
The five statements with the highest quality gap scores	
Items	Mean score
20. Readiness for personal attention	2.05
7. Gets things right the first time	1.89
11. Prompt service	1.88
1. Modern equipment	1.77
16. Consistently courteous by hospital personnel's	1.46

DISCUSSION

In this study Expectation value was consistently high, and significant service quality gap persist for most of the items as well as among all the five domains similar to the study done by Col Avijit Chakraborty and Annamalai Solayappam et al.[4,9] Among all domains highest quality gap score was against the domain empathy for in patient department similar to the study done by Asghar Zarei et al.[1]

According to this study highest expectation score were for item no 7 and 13 (Gets things right the first time and Prompt response to any request). Similar result also found in other studies.[1,4]

Highest perception score was against the item no 19 (Convenient working hours), but a study done by Dr, Mamta Brahmbhatt et al found that the lowest perception score was for the same.[10] In this BPHC level hospital services are available for 24 X 7 hours with emergency services and in INDIA as per govt. rule no BPHC level hospital can deny any patients at any time of the day. Study done by Mamta Brahmbhatt et al included 5 private hospitals with 3 govt. hospital. Private hospital can mention a particular time for their services which a govt. hospital of BPHC level cannot. Probably due to these two causes findings of this study did not match with the study done by Mamta Brahmbhatt et al.

This study has focused on a very important aspect of our existing health system. In the present scenario when we regularly find that in spite of most of the facilities

available, patients are willing to go directly in tertiary care hospital. This study helps policy makers, health care managers and administrators to plan conceptually in improving health care delivery system.

The analysis of this study highlights some areas where the hospital services are far away from the patients expectation and some other aspects where patients perception are very close to patient expectation. In all five dimensions expectation is always higher than patients' perception suggesting that there is a scope for improvement of service quality. Keeping in mind about the limitation of health delivery system, specially resource related, this study will guide to prioritize hospital services. As the quality of services is multidimensional and always very difficult to measure, this study supports to measure service quality and consequently monitor it systematically in order to improve quality of services or decrease the gap between patients expectation and perception as much as possible. Finally it should be kept in mind that service quality or patient perception and expectation cannot be fully measured by a questionnaire. A combined qualitative and quantitative research method in future will provide a better assessment of service quality of health care system.

CONCLUSION

This study measured service quality of a hospital in the context of patients' perceptions and expectations and identified some areas of improvement while catering health services. The findings can help the healthcare provider to plan conceptually in improving health care delivery systems.

REFERENCES

1. Zarei A, Arab M, Froushani A, Rashidian A, Tabatabaei S. Service quality of private hospitals: The IranianPatients' perspective. BMC Health Serv Res. 2012;12:31.
2. Irfan S, Ijaz A, Farooq M. Patient satisfaction and service quality of public hospitals in Pakistan: an empirical assessment. MEJSR. 2012;6:870-7.
3. Qadri S, Pathak R, Singh M, Ahluwalia S, Saini S, Garg P. An assessment of patients satisfaction with services obtained from a tertiary care hospital in rural Haryana. Int J Collab Res Intern Med Public Heal. 2012;4(8):1524-37.
4. Chakravarty A. Evaluation of service quality of hospital outpatient department services. MJAFI 2011;67:221-4.
5. Eleonora K, GlaveliNiki P, Chrissoleon T. Health Care Quality in Greek NHS Hospitals: No one knows better than patients.
6. Kavitha R. A comparative study on patients' satisfaction in health care service. European Journal of Business and Management. 2012;4(13):156-9.
7. Iwaarden JV, Wiele TDV, Ball L, Millen R. Applying SERVQUAL to web sites: an exploratory study. Int. J. Qual. Reliability Manage. 2003;20:919 -35.
8. Tavakol M, DennickR .Making sense of Cronbach's alpha. International Journal of Medical Education. 2011;2:53-5.
9. Solayappam A, Jayakrishna J, Velmani S. Quality measurement for hospital services. IPEDR. 2011;12. IACSIT Press, Singapore
10. Brahmbhatt M, Baser N, Joshi N. Adapting the servqual scale to hospital services: an empirical investigation of patients' perceptions of service quality. Int J Multidiscip Res. 2011;1(8):27-42.