

Patient Satisfaction measurement with Quality of Service in a Public Hospital from Rural West Bengal

Dr.A.Girija¹, Dr. Indranil Basak²

¹Associate Professor, Apollo Institute of Hospital Administration, Hyderabad, Telangana State

²Medical Officer, Basanti Rural Hospital, West Bengal State Health and Family Welfare Samity

Abstract

For measuring healthcare performance, an imperative indicator is patient satisfaction with quality of service. Perception of poor quality by clients leads to some patients altogether bypassing the public hospitals for an alternative provider services. The main objective of this study is to investigate patient satisfaction with quality of services in a public hospital from rural West Bengal. The study is a cross-sectional descriptive design employing quantitative primary data collection methods. Data are collected from 150 inpatients by simple random sampling technique using validated questionnaire of National Quality Assurance Standards operational guidelines for quality assurance of public health facilities. Quantitative data were analyzed using IBM SPSS software Version 28. The results indicated patient satisfaction at 42 % for “good” quality of services. Facility was short to meet patients’ expectation for overall cleanliness. Quality of the service needs to be improved in the admission counter, provision of prescribed drugs and diagnostic tests. Quality of service was also significantly affected by the quality and timeliness of supply of food. In conclusion, patient satisfaction needs to be improved at the facility level in delivering quality of care by improving responsiveness, technical assistance and training along with investment for up gradation of the facility.

Keywords: Patient Satisfaction, Quality of Service, Public Hospital

1. Introduction

In recent years, there has been a drastic change in the health system in terms of the way we take care of the patient and deliver the healthcare services. Now, the patients are increasingly becoming the center of the healthcare service delivery which includes the overall process of treatment. The mission of health system is not contained only to the treatment but has expanded to meet the population health needs and expectations regarding how patient should be treated by the healthcare provider.

Due to increased competition and development in the healthcare industry, health systems changed the way of thinking and delivering care where patients are being recognized as a valuable customer. Patients have become the center of the healthcare process and providing patient-centric services has become an important focus. In a healthcare facility patient satisfaction should be a top priority. It is very important and necessary for a hospital to improve the quality of patient care. For a long term relationship with the patient, listening to patient is a critical component. We can measure the patient satisfaction level from the patient satisfaction survey as it offers an insight into the level of success of the healthcare facility.

Patient satisfaction is a very important and primary tool to measure the effectiveness of health care delivery. It helps the healthcare facility to understand the strengths and weakness of the organization and prepares them to compete with the market in an efficient way so that they maintain a sizeable market share and stay ahead in the healthcare industry.

2. Objectives Of The Study:

- To determine the patient perception of quality of services at Basanti Rural Hospital.
- To identify factors that affect patient satisfaction and quality of services at Basanti Rural Hospital.
- To understand the needs and expectations of the community about the health care facilities for better delivery of services.

3. Hypothesis for the Study

For the assessment of the patient satisfaction, the following hypotheses were framed:

- There is a significant difference in the satisfaction of patients' with respect to the attention provided by doctors'.
- There is a significant difference in the satisfaction of patients' with respect to the nurses' response to patients' complaints.
- There is a significant difference in the satisfaction with respect to the food that was given to the patient.

4. Methodology

4.1 Research design

It is a cross-sectional study deploying descriptive as well quantitative design. This study is conducted in Basanti Community Development Block (CDC) which has a total population of 336,717 (2011 census) and an area of 404 sq.km. Health services in Basanti CDC are provided through governmental health facilities where one rural hospital, three primary health centres and 63 sub-centres along with 20 Health and Wellness Centres (HWC) are there.

Primary data is collected by using Questionnaire derived from National Quality Assurance Standards (2020), to assess the technical and service quality indicators of actual service delivery experiences at Basanti Rural Hospital. The study was done for a period of ten weeks. The dimensions are assessed using Likert scale. The scores of each item are weighted using frequency of responses. Median and Mode of the scores for each dimension are calculated. The total scores of each dimension are calculated for the median score to determine the overall satisfaction index.

4.2 Study variables

The dependent variable of the study is patient satisfaction along with the quality of services provided.

The independent variables in the study include:

- Perception of the hospital service quality: This variable describes patient perception towards service delivery in terms of their responsiveness, assurance and empathy.
- Health System Factors: This variable studies health system factors influencing patient satisfaction and perceptions on quality of services such as staff competence, physical infrastructure and facilities, timeliness of services and staff friendliness.

4.3 Study Population

The study population included In-Patients who visited the public health facility to take curative health care services along with mother and child care services.

4.4 Sampling design

Basanti Rural Hospital was purposively selected since it is the main Hospital in Basanti CDC. All other facilities like the sub centre refer patients to this Hospital. Simple random sampling technique was used to select study respondents where lottery method was used.

4.5 Sample size determination

The quantitative sample size was determined using the formula:

$$n = \frac{Z^2 P (1-P)}{d^2}$$

Where:

Z = Standard Normal deviation (1.96 for a 95% confidence level); P = the proportion of the population having the characteristic being measured; d = the level of accuracy desired, or the sampling error of 0.05.

For measuring patient satisfaction, patients admitted in the hospital situated at Basanti CDC are considered. As the 75th round (July, 2017-June, 2018) National Statistical Organization (NSO) survey reveals that during a 15-day reference period, 7% of rural population is ailing, a population proportion of P=10% is taken for the survey.

Therefore: $n = \frac{(1.96)^2 \times 0.1 \times (1-0.1)}{(0.05)^2} = 138.29$ or 139

So, this sample size was adjusted for the study to 150.

Hence, N = 150, is taken for the study.

4.6 Inclusion Criteria

- All patients who are present in the facility at data collection time and spent at least one overnight stay at the facility.
- Any selected respondent who gave informed consent for participating in the study and are alive during study time.
- Respondents who are above 18 years.

4.7 Exclusion Criteria

The study excluded the respondents who are too sick to take part in the study. The decision to exclude such persons was based on self-reports from patients.

5. Data Analysis and Presentation

5.1 Reliability of the study

The reliability score when tested by Cronbach's alpha gave the Value of 0.944. IBM SPSS Version 28 is used to determine reliability of the instruments. A total of 20 respondents' data was taken into consideration and calculated for reliability score. As the Cronbach's Alpha value is 0.944, it is proved that study instrument is highly reliable.

5.2 Socio - demographic characteristics of respondents

For the socio-demographic profile age, gender, education level and monthly income of the family are considered. In relation to age, the lowest age of the respondent is 18 years and the highest is 77 years. There has been an equal distribution of age group in the study and the most number of respondents are from 36-45 years age group. In terms of gender, 63.3% were females and 36.6% were males. In regard to highest education level, 34% had class six primary education and 26% had education of class eight. It is to be noted that 21% were illiterate. In terms of average monthly income, 28.6% were earning and 25.3% were earning Rs. 5,000 – 8,000.

5.3 Patient satisfaction along with quality of service

Patient satisfaction along with the quality of services was measured with the technical quality and the service quality. Technical quality involves the emergency response, infection control, doctor and nurse promptness during a need, following clinical protocol. Service quality on the other hand includes courteous behavior, hygiene maintenance, cleanliness and prompt service delivery by support staff. The items were analyzed using IBM SPSS statistical software Version 28 as shown in table 1. Mean, Median, Mode and Standard Deviation were calculated for the different parameters of the questionnaire.

Table 1: Patient satisfaction statistics

Variables	Mean	Median	Mode	Std. Deviation
Sufficient information availability at registration/admission counters	2.63	3.00	3	0.680
Waiting time at Registration/Admission counter	2.74	3.00	3	0.709
Behaviour and attitude of hospital staff at registration/admission counter	2.91	3.00	3	0.736
Feedback on discharge process	2.96	3.00	3	0.732
Cleanliness of the in-patient ward	2.63	3.00	3	0.727
Cleanliness of in-patient bathrooms & toilets	2.41	2.00	3	0.715
Cleanliness of Bed sheets, pillow Covers etc.	2.48	3.00	3	0.730
Cleanliness of surroundings and campus drains	2.25	2.00	2	0.827
Regularity of Doctor’s attention	3.32	3.00	3	0.922
Attitude and communication of Doctors	3.32	3.00	3	0.985
Time spent for examination of patient and counselling	3.14	3.00	3	0.890
Promptness in response by Nurses/ward boys or girls in the ward	3.29	3.00	3	0.999
Round the clock availability of Nurses/ward boys or girls in the ward	3.37	3.00	3	0.980
Attitude and communication of Nurses/ ward boys or girls	3.23	3.00	3	1.082

All prescribed drugs were made available from Hospital supply	3.15	3.00	3	0.862
Availability of Diagnostics	3.07	3.00	3	0.852
Timeliness of supply of the diet and its quality	2.71	3.00	3	0.816
Your overall satisfaction during the treatment as an in-patient	2.94	3.00	3	0.869

5.4 Nonparametric tests for Hypothesis Testing

The data when tested with Shapiro-Wilk's test it lacked normality, hence the Sign Test was used for hypothesis testing. The following hypotheses were tested:

5.4.1 Null hypotheses (H_0): There is no significant difference in the satisfaction of patients' with respect to the attention provided by doctors'.

Alternate Hypothesis (H_1): There is significant difference in the satisfaction of patients' with respect to the attention provided by doctors'.

Table 2: Related Sample Sign Test values for the significance of patient satisfaction and attention provided by doctors

Test Parameters	Test Values
Total N	150
Test Statistic	18.000
Standard Error	4.610
Standardized Test Statistic	-5.206
Asymptotic Sig(2-sided test)	< .001

Table-2 shows that the Asymptotic Significance (2-tailed) calculated using an approximation to the true distribution and is less than 0.01, which is lower than the significance value level at 0.05. Hence the Null Hypothesis (H_0) rejected and Alternate Hypothesis (H_1) accepted. So it is concluded that significant difference exists in patient satisfaction with respect to the attention provided by doctors.

5.4.2 Null hypotheses (H_0): There is no significant difference in the satisfaction of patients' with respect to the nurses' response to the patients' complaints.

Alternate Hypothesis (H_1): There is a significant difference in the satisfaction of patients' with respect to the nurses' response to the patients' complaints.

Table 3: Related Sample Sign Test values for the significance of patient satisfaction with respect to the nurses response to the patients complaints

Test Parameters	Test Values
Total N	150
Test Statistic	20.000
Standard Error	4.583
Standardized Test Statistic	-4.692

Asymptotic Sig(2-sided test)	< . 001
-------------------------------------	---------

Table-3 shows that the Asymptotic Significance (2-tailed) calculated using an approximation to the true distribution and is less than 0.01, which is lower than the significance value level at 0.05. Hence the Null Hypothesis (H_0) rejected and Alternate Hypothesis (H_1) accepted. Thus it can be concluded that there exists a significant difference in the satisfaction of patients’ with regards to the nurses’ response to the patients’ complaints.

5.4.3 Null hypotheses (H_0): There is no significant difference in the satisfaction with respect to the food that was given.

Alternate Hypothesis (H_1): There is a significant difference in the satisfaction with respect to the food that was given.

Table 4: Related Sample Sign Test values for the significance of patient satisfaction & the food that was given to patient

Test Parameters	Test Values
Total N	150
Test Statistic	41.000
Standard Error	3.606
Standardized Test Statistic	-4.022
Asymptotic Sig(2-sided test)	< . 001

Table-4 shows that the Asymptotic Significance (2-tailed) calculated using an approximation to the true distribution is less than 0.01, which is lower than the significance value level at 0.05. Hence the Null Hypothesis (H_0) rejected and Alternate Hypothesis (H_1) accepted. Accordingly it is concluded that there exists a significant difference in the satisfaction of patient with respect to the food that was given.

6. Findings

Patient satisfaction measurement provides an important parameter for assessing quality of healthcare indicators which are not well reflected by other service statistics such as patient data, waiting times and consultation times.

The study revealed that the overall satisfaction during the treatment as an in-patient is highest at level of “Good” for 42% with “Fair” and “Good” together at 76%, which implied that about three fourth of the patients have not opted for excellent satisfaction with the quality of the services.

Quality of services

The study pointed to the fact that availability of prescribed drugs and diagnostics in the facility should be improved as nearly 70% of the responses pointed with “Fair” and “Good”. As most of the population who come to take the service belong to the rural part where 54% of the average income do not cross Rs. 8,000, the improvement in provision of prescribed drugs and diagnostics will decrease the out of pocket income for the treatment.

Waiting time at the admission counter was mostly observed to be 5 – 10 minutes which was also reflected during the survey, 51% respondents with the same, but for 37%, the time was more than 10

minutes. 60% of the respondents (36% with “Good” and 23% with “Very Good”) were satisfied with the information at the counter to be useful. 57% responded with “Good” for the behavior and attitude of hospital staff at the registration counter.

Cleanliness of wards, bathrooms, toilets, surroundings and laundry needs to be improved a lot as most of the respondents in these categories were not very satisfied. Another area of concern was that of timely supply of diet and its quality where 85% respondents (47% with “Good” and 37% with “Fair”) reported to be not satisfied. Regarding regularity of Doctors and attitude and communication, 43% opted for “Good” and 25% opted for “Very Good”.

For counseling and examination of patients there needs to be a more humane approach with empathy. Explaining and communicating provider intentions as well as interventional outcomes such as diagnosis, treatment plans, their purposes have a positive effect on patient perception. This requires service providers to create a good rapport that makes patients feel comfortable and confident with the process. Achieving such an objective leads into positive ratings on the perceived quality of the services available in the facility. Empathy is an essential aspect of service delivery which influences the perception on quality of services. Round the clock availability of Nurses and ward boys was satisfactorily on the higher side with 44% opted for “Good”, 20% for “Very Good” and 17% for “Excellent”. Promptness in response by Nurses and ward boys also showed similar type of response.

During testing of the hypotheses it was seen that the overall satisfaction of patients along with quality of service is affected by factors like attention provided by doctors, response to the patients complaints by nurses, ward boys and the quality of food supplied on proper time. Patients prefer facilities that are prompt in service delivery within the service charter. Time spent when seeking health services is one of the essential aspects that influence patients’ decisions in choosing health facilities.

7. Conclusion

Results indicated an overall “Good” quality perception towards the health services. But, the facility was short to meet patients’ expectations from visual appearance and overall cleanliness of the facility. Quality of the service needs to be improved in the admission counter, provision of prescribed drugs and diagnostic tests. Quality of service was also significantly affected by the quality and timeliness of food supplied to the patients. Patients were satisfied by the concern and promptness showed by doctors and nurses in attending to their needs. Healthcare quality satisfaction was shown to be dependent on the attention and response provided to the patients by the doctors and nurses along with ward boys.

8. Suggestions

The study recommends that the Basanti Rural Hospital in collaboration with all the stakeholders at Block, District, State and National level do the following:

1. Improving responsiveness of services by ensuring service delivery adheres to the requirements of the patients and continual identification of patients needs for improved patient satisfaction.
2. Scale up quality improvement interventions through provision of technical guidance, hands on training, modern medical equipment, expansion and modernization of facilities for efficient and effective service delivery, competence development, reduction in out of pocket expenditure and improved patient-provider relationships.

3. Scale up investment in health system capacity to deliver quality patient centered services through employment of adequate, well trained staff. This helps in enhancing operational capacity and service delivery by providing adequate drugs and diagnostic facilities.

Bibliography

1. Asnawi, A., et al. "The influence of hospital image and service quality on patients' satisfaction and loyalty." *Management Science Letters* 9.6 (2019): 911-920.
2. Bazant S. and Koenig A. (2009), "Women's satisfaction with delivery care in Nairobi's informal settlements", *International Journal for Quality in Healthcare*, 21(2): 79-86.
3. Brady, M. and Cronin, J. (2001), "Some new thoughts on conceptualizing perceived service quality: a hierarchical approach", *Journal of Marketing*, 65(3):34-49.
4. Brown, C. (2007), "Where are the patients in the quality of health care?", *International Journal for Quality in Health Care*, 19(3): 125-6.
5. Caha, H. (2012), "Service Quality in Private Hospitals in Turkey", *Journal of Economic and Social Research*, 9 (1), 55-69.
6. Creel L., Sass, J. and Yinger, N. (2002), "Client-centered quality: clients' perspectives and barriers to receiving care", *New Perspectives on Quality of Care*, 13(5):385-390.
7. Dagger, T, Sweeney, J. and Johnson, W. (2007), "A hierarchical model of health service quality: scale development and investigation of an integrated model", *Journal of Service Research*, 10(2):123-42.
8. Darmawan, Dedit, et al. "BPJS Patients Satisfaction Analysis Towards Service Quality of Public Health Center in Surabaya." *Media Kesehatan Masyarakat Indonesia* 18.4 (2022): 124-131.
9. Dey P., Hariharan S., Brookes, N. (2006), "Managing healthcare quality using logical framework analysis", *Managing Service Quality*, 16(2): 203-222.
10. Hussen, Mustefa Adem, and Bekelu Teka Worku. "Quality of Antenatal Care Service and Factors Associated with Client Satisfaction at Public Health Facilities of Bele Gasgar District." *Journal of Patient Experience* 9 (2022): 23743735221083163.
11. Moslehpour, Massoud, et al. "The effect of physician communication on inpatient satisfaction." *Healthcare*. Vol. 10. No. 3. MDPI, 2022.
12. Mrabet, Slimane, Sidi Mohammed Benachenhou, and Afef Khalil. "Measuring the effect of healthcare service quality dimensions on patient's satisfaction in the Algerian private sector." (2022).
13. Neaves, Bianca, Jack J. Bell, and Sally McCray. "Impact of room service on nutritional intake, plate and production waste, meal quality and patient satisfaction and meal costs: a single site pre-post evaluation." *Nutrition & Dietetics* 79.2 (2022): 187-196.
14. Novitasari, Dewiana. "Hospital Quality Service and Patient Satisfaction: How The Role of Service Excellent and Service Quality?." *Journal of Information Systems and Management (JISMA)* 1.1 (2022): 29-36.
15. Sinyiza, Frank Watson, et al. "Patient satisfaction with health care at a tertiary hospital in Northern Malawi: results from a triangulated cross-sectional study." *BMC Health Services Research* 22.1 (2022): 1-9.

16. Sitio, Tianur, and Hapzi Ali. "Patient Satisfaction Model and Patient Loyalty: Analysis of Service Quality and Facility (Case Study at Rawamangun Special Surgery Hospital)." *Scholars Bulletin* 5.10 (2019): 551-559.
17. Yusefi, Ali Reza, et al. "Patients' perceptions of the quality of nursing services." *BMC nursing* 21.1 (2022): 1-11.