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Research Article

ANALYSIS OF PATIENT SATISFACTION SURVEY IN MULTI-SPECIALTY ACCREDITED TERTIARY CARE HOSPITAL IN NORTHERN INDIA

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ABSTRACT

Expectations of today's healthcare consumers mirror other industries, with customers used to benefits like 24-hour services or mobile access. The ideal patient experience is built on clinical and nonclinical factors like convenience, customer service and staff attitudes. The measurement of patient satisfaction is an integral part of hospital market research. Aim was to understand response rates, cumulative satisfaction levels and effect of the accreditation process on response rates.

The data-based study was conducted with a brief, easy to complete questionnaire suitable for a hospital-based setting. The Woodward scale was followed as a base line. Feedbacks were collected from January 2011 to December 2013, from a total of 26991 patients, with 11 parameters judged over a 3 point scale to capture the level of satisfaction of admitted patients.

There was a statistically significant increase in the number of responses and response rates in 2012 and 2013 from their respective previous years, ($p<0.001$). This was attributed to the awareness created amongst the staff about this aspect during the accreditation process. Out of 11 aspects rated, the nursing care was rated best followed by the medical care. The lowest ratings were received by the cafeteria and the discharge process.

The patient satisfaction surveys are an important tool to know the voice of the customer and can be used as a tool for improving the care delivered. The accreditation process does help in raising awareness about the importance of the customer feedbacks, their analysis and use of the same for improving the service quality.

Keywords: *Patient Satisfaction Survey, Response Rate, Patient Feedbacks, Survey Results*

INTRODUCTION

The service industries have been paying attention to customer satisfaction since ages. Health care is the only industry which has virtually left the customer out for years. The strong physician mentality, which dictates that health care is a special thing understood by doctors only, contributes to this apathy towards customer views. To ignore the input from the patient or customer is not living with reality today.

The patient perspective is becoming more and more important in the process of improving health care systems. To achieve this, measuring patient satisfaction is an important component in assessing healthcare service quality. Patient perspectives about level of care can result in feedback which is useful for promoting higher-quality standards of patient care (Young *et al.*, 2000). Although patient satisfaction surveys are increasingly endorsed as a means of understanding health care service quality, for various reasons it could be argued that their function should include a measurement to quantify perceptions (Crow *et al.*, 2002).

It is well understood now that patient satisfaction surveys help us to identify ways of improving our existing practices. This more than often results in better care and happier patients. It also instigates an organizational culture of caring for its customers and looking for ways to improve its service quality.

Despite all the controversies persistent in today's environment, about the utility of patient satisfaction surveys, the fact remains that the market today demands that this data be analyzed and used to retain patients. This in turn helps us to ensure a firm position in our healthcare provider peer group.

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It has been established that elements of hospital environment, such as sounds, pictures, aromas, air quality, furnishings and layout, can influence patient recovery (Caramenico, 2012). These elements in today's times also affect patient satisfaction along with the other basic aspects like medical care, nursing care, dietary services, staff behavior etc.

Expectations of today's healthcare consumers mirror other industries, with customers used to benefits like 24-hour service or mobile access. An ideal patient experience is also built on nonclinical factors like convenience, customer service and staff attitudes. Personal experience in the provider sector includes facilities that offer multiple services in one location, ability to exchange information through online, mobile channels of communication, patient education during a visit, cafeteria, access to Wi-Fi and other entertainment. One of the biggest reasons for positive experience in a hospital was staff behavior. In their interactions in a hospital, consumers are about twice as likely as those in the airline, hotel and banking industries to say that staff friendliness and attitude contributed to a good or bad experience (Karen, 2012).

The measurement of patient satisfaction is thus an integral part of hospital market research. Just as consumer satisfaction is a function of the extent to which providers do things right, the value of consumer-oriented market research is directly related to whether the research itself is done right. The use of poorly designed consumer research instruments, no matter how well executed, can cause multi-co linearity among the independent variables, which, in turn, can result in misleading conclusions (Stratmann *et al.*, 1994).

Aim of this study was to understand the response rates, the cumulative satisfaction levels and results and also the effect of the accreditation process on the response rates.

MATERIAL AND METHODS

It was decided to conduct the survey with a brief, easy to complete questionnaire suitable for a hospital-based setting. The ten-item scale of Woodward et al was followed as a base line (Woodward *et al.*, 2000).

A data based study of patient satisfaction surveys, was conducted at a 300 bedded multi specialty hospital in north India. During the three years period (January 2011 to December 2013), a total of 26991 patient feedbacks were collected.

The printed feedback form with 11 parameters judged over a 3 point scale viz, excellent, good and poor was used to capture the level of satisfaction. The forms were handed over during the stay but before the discharge procedure. These were collected at the time of discharge by the nursing managers of the ward or the floor administrators. The participating patients and their attendants were those who were admitted in wards and were conscious, oriented and stable enough to understand the form. For this purpose, patients admitted in wards only (and not critical areas) were covered for the survey. The effort was to get a real time feedback from patients, just before they left the hospital. Few of the survey forms were filled during face to face interactions with the hospital staff. The attendants were also involved in completing the surveys in cases where patients did not want to or could not write themselves. For children, their parents or guardians filled the forms.

Each form had the questionnaire in two basic languages used in the area i.e., English and Hindi .The questionnaire contained 11 parameters related to the hospital experience namely medical care, nursing care, diagnostic services, facilities, dietary, cafeteria, housekeeping and linen, behavior of hospital staff, admission, discharge and ambience. There were also options for rating the overall experience and for stating the reason for choosing the hospital, suggestions for improvements and lastly, whether they would like to visit the hospital again.

The patient mix which participated in giving the feed backs was from all basic specialties like Medicine, Surgery, Pediatrics, Obstetrics and Gynecology, Oto-rhinolaryngolgoy ,Ophthalmology , Orthopedics along with a few Super-specialties like Urology, Nephrology, Respiratory Medicine, Neurology, Cardiology, Neurosurgery, Plastic Surgery and Cardiothoracic and Vascular Surgery.

Exclusions

A few hospital units like Physiotherapy, Health Check Department, General and Private out-patients and Emergency were excluded to enable capturing the effect of services related to inpatients only. The various

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critical care units of the hospital like Medical, Surgical, Neonatal, Neurology, Neuro-Surgery intensive care units and Cardiac Critical care, were not included.
Chi Square test was applied to derive at the comparisons and to establish statistical significance between aspects.

RESULTS AND DISCUSSION

Results

The total number of discharges in the three consecutive years 2011, 2012 and 2103 were 22150, 24125 and 22615 and feedbacks which could be collected during these years were 5274, 10344 and 11373 respectively.
The cumulative response rate was 23.81% (2011), 42.88% (2012) and 50.29% (2013) which showed a consistent increasing trend. The overall response rate for the three years was 39.18%. The improvement seen in the years 2012 and 2013 when compared from previous years was statistically significant, (p value <0.001) (Table 1).

Table 1: Comparison of response rates of the three years

	2011	**2012**	**2013**	**Total number (2011 to 2013)**
Total discharges	22150	24125	22615	68890
Total feedbacks collected	5274	10344	11373	26991
Response rate	23.81%	42.88%*	50.29%*	39.18%

*Note: * signifies p<0.001*

The cumulative response rates were higher during the months March, April, May and during August, September, and October. This trend was attributed to seasonal variations in hospital occupancy across the year.
Out of the 11 services analyzed, the best two services emerged as nursing care followed by medical care. The best rated was nursing care which received 76.10% excellent ratings in 2011, 87.47% in 2012 and 67.18% in 2013. The nursing care showed considerable improvement from 2011 to 2012 but the ratings declined in 2013 which was statistically significant, (p<0.001). Medical care was rated excellent by 69.10% respondents in 2011, 67.86% in 2012 and 65.50% in 2013.

Table 2: Percentage ratings of various services offered.

S.No.	**Services**	**Combined ratings 2011-2013**	**2011**	**2012**	**2013**
1	**Nursing care**	75.83	76.10	87.47*	67.18*
2	**Medical care**	67.10	69.10	67.86†	65.50*
3	**Staff behavior**	66.00	65.13	67.03*	63.79†
4	**Diagnostics**	64.54	63.25	65.97*	63.82*
5	**Facilities**	63.71	61.36	64.78*	63.14†
6	**Housekeeping**	63.36	59.86	64.62*	61.38*
7	**Ambience**	63.08	61.72	63.71*	61.46†
8	**Admission process**	61.05	55.51	62.03*	65.45*
9	**Dietary**	60.22	53.78	61.65*	63.81*
10	**Discharge process**	59.17	51.13	60.62*	62.65*
11	**Cafeteria**	58.42	48.94	59.81*	61.79*

*Note: * signifies p<0.001*
† signifies p<0.05

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A steady sliding trend was observed over the three years with regards to medical care ratings, which was also found to be statistically significant ($p<0.001$), (Table 2). The percentage excellent ratings of the other services in the decreasing order are shown in Table 2.

The study showed statistically significant improvement in almost all the areas in 2012 as compared to 2011. However in 2013 a decline in excellent ratings is seen in nursing care, medical care, staff behavior, diagnostics, facilities, housekeeping and ambience, staff behavior, facilities and ambience which were statistically significant. The ratings for admission process, dietary, discharge process and cafeteria showed a consistent improvement in 2102 and 2013 and was statistically significant, ($p<0.001$), (Table 2).

The percentage poor ratings of the services in the decreasing order were also studied. The discharge process and cafeteria received the highest number of poor ratings. The discharge process was rated poor as 6.15%, 4.35% and 2.67% in the three consecutive years respectively, which showed statistically significant improvement in services over the three years ($p<0.001$). Closely second to it was cafeteria which was rated poor as 5.90%, 3.67% and 2.68% over the three years, also depicting a statistically significant ($p<0.001$) improvement in services with each progressive year.

Overall experience during the hospital stay was rated as excellent during the three years as 56.87%, 59.83% and 63.13% respectively indicating an increase which was statistically significant ($p < 0.001$).

Discussion

Many studies are available in literature which reflects on various aspects of the patient satisfaction surveys. An important factor emphasized in different studies, which also affects the validity of the study itself, is the number of responses analyzed. As stated in a few studies, the more responses are captured, the more valid and reliable results are likely to be. In a survey involving less than 100 responses, the response rates are not worth analyzing and are usually used individually for making choice of local hospitals (Comarow, 2000). For example, a 40 percent response rate in a survey cannot provide any meaningful conclusions if only 100 patients have been surveyed. The number of responses, thus, is important to make the study valid and get reliable results. A minimum of 200 responses has been recommended by experts beyond whom the margin of error becomes unacceptable (White, 1999).

Review of literature showed that responses were analyzed over a range of 200 to 3985. Wolosin *et al.*, (2006) have undertaken a study with 3985 responses, Garman et al (2004) have reported 1485, Ketefian *et al.*, (2004) as 619 and Santuzzi *et al.*, (2009) as 446 responses, Ogunfowokan *et al.*, (2012) as 270 and Georgios *et al.*, (2009) have reported a study involving 200 responses. Our study thus stood robust in this aspect in having reported the largest number of responses. To the best of our knowledge, the number of responses in this study is among the largest collected in any data based study. The numbers of responses analyzed in our study were 26991, out of a total of 68890 discharges, over a period of three years i.e. 2011-2013.

The current study undertaken demonstrates a cumulative response rate of 39.18% for the three years which was similar to other studies quoted by Santuzzi *et al.*, (2009) and White (1999) as 30% and 35%respectinely (Table 3). Individually, the study shows a statistically significant progression in the responses rates as 23.81%,42.88% and 50.29% respectively, ($p<0.001$). The reasons attributed to this development were that the hospital was preparing for the accreditation process during 2011, when it started focusing on collection of feedbacks from patients. Patient satisfaction was an important indicator which required be collecting and analyzing in the accreditation standards.

The response rates were higher during the months March, April, May and during August, September, October, which reflected the increased number of admissions during these months because of seasonal patterns of hospital occupancy. The higher response rates were achieved as a result of aggressive measures, strict monitoring and continuous emphasis on collection of feedback in the daily administrative meetings.

The response rates mentioned in a study by Ogunfowoka *et al.*, (2012) done in a OPD/ out clinic based survey was 84.4%. In another study by Alemi *et al.*, (2008) involving very brief, minute surveys with just three short questions, the response rates have been quoted between 34-77 % (Table 3).

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The results of satisfaction surveys in our study revealed the nursing service as the best rated service with 75.83% excellent ratings followed by medical care with 67.10%. The overall satisfaction rate was 58.24%. These were in accordance with the study done by Georgios *et al.*, (2009) who have also reported higher ratings for nursing care, medical care and overall satisfaction rates as 86.43%, 89.72% and 75.12% respectively. The results of the present study show an overall improvement in most of the aspects in 2012 and 2013. The sliding trend seen in ratings for nursing care and medical care in 2013 was attributed to the increased attrition rates of nurses, for which some factors beyond control, were responsible (Table 3).
Nursing care was rated as the best service aspect in our survey which could be correlated with studies done by Georgios *et al.*, (2009) and Al-Mailam *et al.*, (2005) where it was either second best or best rated experience respectively by in-patients, amongst all aspects.

Table 3: Comparison with other studies

	White (1999)	**Wolosin *et al.*, (2006)**	**Santuzzi *et al.*, (2009)**	**Alemi *et al.*, (2008)**	**Georgios *et al.*, (2009)**	**Al-Mailam *et al.*, (2005)**	**Present Study**
A. Response							
Number of responses	-	3985	446	-	200	-	18612
Response rate	35%	--	30%	34-77%	-	-	39.18%
B. Satisfaction Rates							
Overall	-	-	-	-	75.12%	-	58.24%
Nursing care	-	-	-	-	86.43%	-	75.83%
Medical care	-	-	-	-	89.72%	-	67.10%
C. Best rated service					Nursing care	Nursing care	Nursing care
D. Nursing care ratings							
Excellent	-	-	-	-	-	91.9%	75.83%
Very good	-	-	-	-	-	3.9%	-
Good	-	-	-	-	-	-	23.54%

Despite the much hyped interest shown by healthcare institutions, in satisfaction surveys, the results remain insufficiently discussed within concerned teams and underutilized by hospital staff (Boyer *et al.*, 2006). Even today, the healthcare industry interprets and uses these surveys inconsistently (1999). Literature reflects some evaluations of the relationship between patient satisfaction measures and subsequent return to the provider for further care. Although the size of these relationships was generally small the estimated financial implications were substantial (Garman *et al.*, 2004).
Most healthcare managers feel that a good survey result serves as a pat on the back for the staff and colleagues. Some groups build the results into the compensation structure. But studies suggest that when patient satisfaction surveys are utilized in pay for performance calculation, it constitutes a very small

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portion of the total money at stake and is unlikely to lead to gaining through acquiescence to patients request for unnecessary treatments (Irwin, 2008).

Conclusion

The number of responses is an important aspect for the relevance of any patient satisfaction survey. Our study results conclude that the accreditation process raises awareness of the patient satisfaction surveys and hence the response rates are better in an accredited hospital. The nursing and medical care is the best rated service in patient satisfaction surveys.

There is ample of evidence that this trend of hospitals and insurers competing for loyal customers served by latest care and coverage models in a more retail oriented health market is here to stay and gain strength.

Other dimensions of the importance of customer feedbacks in healthcare industry are also catching the attention of the stakeholders. Hospital administrators have aptly realized that patient experience not only affects customer loyalty but also healthcare related reimbursements. The voice of customer is no longer the best kept secret in healthcare, and is changing, as patients exert greater control over how their money is spent, and hence they exercise their power to vote with their feet and wallets.

Accreditations and certifications are definitely helping hospitals in strengthening the focus on patient feedbacks, its analysis and also use of this data for their benefit.

Statement of Competing Interests: The authors have no competing interests.

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