Original Research Article

A Holistic Approach to Assess Patient Satisfaction and Experience at a Tertiary Gastrointestinal Surgery Center

Abstract

Aims: To assess the patient experience and overall satisfaction using a holistic approach in patient with gastro-intestinal and hepato-pancreato-biliary diseases managed at tertiary care center.

Place and Duration of Study: The study was conducted from January 2022 to December 2022 in a single unit of the Department of Gastrointestinal Surgery at G.B. Pant Hospital, New Delhi.

Methodology: A total of 216 patients participated in the feedback survey. The study design utilized a patient feedback questionnaire consisting of 20 multiple choice questions and two open ended questions. The Questionnaire was designed in a four point Likert scale format. Response to each question was scored from 1 to 4, score 1 being least satisfied and 4 for most satisfied and a cumulative score was then generated by adding scores of all the 20 questions (maximum score-80).

Results: A total of 216 patients participated in the feedback survey. Out of which 134 (62%) were female and 82 (38%) were male. The mean satisfaction score was 70.31(out of 80). The mean satisfaction score for males was 69.22 and for females 70.99, and the difference was not statistically significant ($p = 0.254$). The satisfaction score was 69.17 for patients with malignant disease as compared to those who had benign diagnosis; 70.94 ($p = 0.262$). A total of 176 patients had highest satisfaction with the care and checkups done by the treating surgical team and the mean satisfaction score for this group was 74.2 compared to the group who scored less than 4; 53.1 ($p = 0.001$). Similarly patients who were highly satisfied with the time given by the doctors and the behavior of the treating surgical team had significantly higher mean satisfaction score as compared to the patients who were less satisfied ($p = 0.001$).

Conclusion: The clinical outcomes alone are not an indicator of patient's experience during his or her hospital stay. Hence a well-designed feedback form including factors other than the clinical outcomes leads to a more complete assessment of patient satisfaction and experience.

Keywords: Patient satisfaction, clinical outcome, Experience, feedback survey, Peri-operative

1. Introduction:

Admission in a health care center for the management of any surgical disease has its bearing on the physical, psychological and emotional state of patient and relatives. This journey starts right from the registration counter for admission to the ward experience, operation theatre and post-operative intensive care unit (ICU) stay and care. The traditional indicators of clinical outcomes such as complication rates and mortality are inadequate surrogate measures for

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good care and overall satisfaction of the patient, and that a more holistic approach is needed [1]. Measuring outcomes has become an increasingly important tool in the field of medicine, however satisfaction largely remains an undefined and difficult to measure parameter [2]. Satisfaction is multifactorial and requires capturing patient views more comprehensively through a detailed questionnaire including both multiple choice and open ended questions to assess the patient experience in a holistic manner. Patients want to know more about their diagnosis, recovery process and issues associated with their surgery once they have gone home after surgery. Postoperative satisfaction with information may improve if patients are given more information on these topics [3].

The patients' satisfaction with treatment process positively influences the image of the hospital. There is the need to satisfy the health needs of patients by the medical facilities, but also to strive to meet these expectations, which leads to increased satisfaction considering the quality of medical services.
There is a persistent need to assess whether the hospital met the patients' requirements, fulfilled his expectations, which factors had an impact on the assessment made by the patient, as well as which fields of treatment process should be improved in order to achieve better overall patient satisfaction and experience [4].

Gastrointestinal and hepato- biliary surgery can be a challenging area for patient experience. These are supra major surgeries which requires providing patient with proper information, counselling and nursing care in the pre-operative period and dedicated ICU care and rehabilitation during the post-operative recovery. Hospital stay may get prolonged in order to optimize the patient before operation or if any complication occurs post-operatively. To make this journey in the hospital smooth and hassle free, a team of dedicated healthcare workers need to work in a coordinated way. This team includes persons at registration counter, ward boys, nurses, doctors and physiotherapists. A break in coordination at any level, may cause discomfort or complication in the patient management pathway and can lead to bad experience or poor patient satisfaction. Very little research has been done looking specifically at experiences of patients undergoing gastrointestinal and hepato-pancreato-biliary surgery.

The aim of this study was to assess the patient experience and overall satisfaction using a holistic approach in patient with gastro-intestinal and hepato-pancreato-biliary diseases managed at tertiary care center.

2. Methods:

2.1 Study design

This was a retrospective study analyzed from a prospectively maintained database (from January 2022 to December 2022) of a single unit of the Department of Gastrointestinal Surgery at G.B. Pant Hospital, New Delhi.

The study design utilized a patient feedback questionnaire consisting of 20 multiple choice questions and two open ended questions. The questionnaire was designed in such a manner that it contained questions from all the areas related to patient's hospital stay. This included questions related to the experience during admission process, ward cleanliness, behavior of medical staff towards patient and their availability, time given to patient by doctors and information provided to the patient during the treatment course. It also included questions

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related to the availability of medicines and provisions for required imaging and lab investigations, and regarding availability of food and its quality. Two open ended questions were asked, one related to any suggestion patient want to give so as to improve the experience of hospital stay another asking whether patient wants to receive treatment again in the same hospital.

The Questionnaire was designed in a four point Likert scale format. Response to each question was scored from 1 to 4, score 1 being least satisfied and 4 for most satisfied and a cumulative score was then generated by adding scores of all the 20 questions (maximum score-80).

2.2 Data Collection, storage and analysis

All patients admitted to Gastrointestinal surgery unit were included in the study. Patients who were managed conservatively were also included.

The feedback form was either given in person to the patient at the time of discharge or was mailed to the patient. Patient who received the form in person had submitted it to the ward nursing officer and at the same time also had to take a photograph of the form and send it to an institutional phone number provided at the time of discharge. Patients who mailed their choices directly submitted the form in the Google form format at the institutional email address.

Demographic data and data related to surgery and post operative management and complications and hospital stay was taken from the discharge tickets of patients.

3. Statistical analysis:

Values were reported as mean and standard deviation or median and range. Continuous variables were analysed using students t test, while discrete variables were compared using Pearson's Chi-squared test. ANOVA test was used for evaluating differences between three or more samples mean when required. All descriptive analysis and summary statistics were analysed using SPSS Statistics Version 24. Statistical significance was defined by $p < 0.05$.

4. Results:

4.1 Demographics

A total of 216 patients participated in the feedback survey. Out of which 134 (62%) were female and 82 (38%) were male. The mean satisfaction score was 70.31(out of 80). The mean satisfaction score for males was 69.22 and for females 70.99, and the difference was not statistically significant (p = 0.254). The cohort had a mean age of 45.38 years (Range 15- 75 year). The mean satisfaction score according to the age group is shown in Table 1 and is not statistically significant (p = 0.478).

Table 1: Age group wise mean satisfaction score

Age group(year)	Number of patients(n)	Mean satisfaction score	
15-30	36	72.38	p value = 0.478
31-45	68	69.13	
46-60	75	70.85	

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>60	37	69.37	

One of the open ended question which was asked to patients was 'whether they want to get treated again in this hospital', to which 207(95.8%) patients replied positively. Nine patients (4.2%) replied 'No' to this question.

4.2 Patient satisfaction and type of disease

One hundred and forty patient had benign disease after clinical and histopathological diagnosis while rest 76 patients had malignant disease. The satisfaction score was 69.17 for patients with malignant disease as compared to those who had benign diagnosis; 70.94 ($p = 0.262$).

4.3 Peri-operative factors

Out of the 216 patients a total of 160 patients received surgical management while 56 were managed conservatively. And among the patients who got operated 46 underwent laparoscopic procedures while rest of the 116 patients underwent open surgery. The mean satisfaction score for patients who underwent laparoscopic surgery was 69.07 compared to those who underwent open surgery; 70.76 ($p = 0.374$).

A total of 57 patients had some form of complications in the post operative period and was classified according to the Clavian Dindo (CD) classification. The mean satisfaction score for patients who had post operative complication was 71.82 compared to patients who did not have any post op complication; 69.77 ($p = 0.229$). Out of these 57 patients thirty two had CD I and twenty five had CD II/III grade of post op complication and again the difference in mean satisfaction score between these two group was statistically insignificant ($p = 0.793$).

4.4 Length of stay

Length of stay (LOS) was calculated from the day of operation to the day of discharge and it varied from 1 day to 30 days (mean LOS = 7.8 day). Patients who were discharged early (within 48 hrs.) were compared with patients who were discharged late (after 48 hrs.). Twenty two patients were discharged early and had a satisfaction score of 68.23 compared to patients who were discharged late, 70.55 ($p = 0.350$).

When asked for any suggestions to improve the facilities provided in the hospital, 200 patients replied that they were well satisfied with the treatment and facilities provided, while sixteen patients replied with some suggestion. Some of the suggestions received were " laboratory reports should be made available online"(3 patient), "ward cleanliness should be improved" (6 patients), "all medicines should be available free of cost"(2 patient), "quality of food provided to patients need improvement"(3 patient), "discharge process takes time"(1 patient), ward boy behavior need improvement"(1 patient).

4.5 Survey results

Table 2 shows the feedback survey results. Patients scored from 1(lowest satisfaction) to 4 (highest satisfaction level) for all the 20 questions asked in the feedback form. A total of 176 patients had highest satisfaction with the care and checkups done by the treating surgical team and the mean satisfaction score for this group was 74.2 compared to the group who scored less than 4; 53.1 ($p = 0.001$). Similarly patients who were highly satisfied with the time given by the doctors and the behavior of the treating surgical team had significantly

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higher mean satisfaction score as compared to the patients who were less satisfied (p = 0.001).

A similar trend of significantly better mean satisfaction score was noticed in patients who were highly satisfied with the ward cleanliness, care provided by the nursing staff and the quality of food delivered to the patients during their hospital stay.

Table 2: Results of the feedback survey

Questions asked	Score given by patients			
	1	2	3	4
	No. of cases (%)	No. of cases (%)	No. of cases (%)	No. of cases (%)
Patient directions and signboards	4 (1.9%)	14 (6.5%)	69 (31.9%)	129 (59.7%)
Registration time	28 (13.0%)	48 (22.2%)	51 (23.6%)	89 (41.2%)
Behaviour of registration personnel	6 (2.8%)	32 (14.8%)	65 (30.1%)	113 (52.3%)
Hospital discharge process experience	3 (1.4%)	17 (7.9%)	57 (26.4%)	139 (64.4%)
Ward cleanliness experience	3 (1.4%)	11(5.1%)	55 (25.5%)	147 (68.1%)
Toilet/bathroom cleanliness experience	6 (2.8%)	33 (15.3%)	54 (25.0%)	123 (56.9%)
Bed cleanliness experience	5 (2.3%)	17 (7.9%)	68 (31.5%)	126 (58.3%)
Cleanliness of hospital premises and drains	4 (1.9%)	29 (13.4%)	62 (28.7%)	121 (56.0%)
Regular check-ups and care by Doctor	2 (0.9%)	8 (3.7%)	30 (13.9%)	176 (81.5%)
Behaviour of Doctors towards patients	3 (1.4%)	6 (2.8%)	34 (15.7%)	173 (80.1%)
Satisfaction with the time given for consultation/examination	3 (1.4%)	11 (5.1%)	59 (27.3%)	143 (66.2%)
Readiness and alertness of nursing staff to care	4 (1.9%)	9 (4.2%)	50 (23.1%)	153 (70.8%)
24 Hr availability of nursing staff in the ward	4 (1.9%)	9 (4.2%)	34 (15.7%)	169 (78.2%)
Behaviour of nursing staff towards patients	3 (1.4%)	9 (4.2%)	36 (16.7%)	168 (77.8%)
Availability of ward boys(female staff) and their behaviour towards	3 (1.4%)	18 (8.3%)	51 (23.6%)	144 (66.7%)

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patients				
Availability of medicines in the hospital	14 (6.5%)	30 (13.9%)	50 (23.1%)	122 (56.5%)
Availability of lab tests, X-ray etc in the hospital	3 (1.4%)	9 (4.2%)	52 (24.1%)	152 (70.4%)
Timeliness of food delivery in the hospital	3 (1.4%)	25 (11.6%)	45 (20.8%)	143 (66.2%)
Quality of food delivered to the patients	3 (1.4%)	27 (12.5%)	64 (29.6%)	122 (56.5%)
Satisfaction with the treatment and care provided at the hospital	3 (1.4%)	12 (5.6%)	42 (19.4%)	159 (73.6%)

5. Discussion

Quality improvement is now a driving force in healthcare and is an essential aspect of service delivery at all levels. A persistent analysis of service delivery and continuous adaptations and improvement is required to achieve this. A regular feedback of patient satisfaction and experience obtained through a well-designed feedback form could be of immense help to include the patient perspective in quality improvement. Available evidence suggests that healthcare quality assessment becomes more authentic and legitimate if the patient perspective is integrated into the measurement tool [5].

Patient satisfaction is a subjective and multifactorial phenomenon, therefore the traditional methods of evaluating clinical outcomes, such as complication rate, length of hospital stay, morbidity and mortality rates may lack in the proper assessment of patient satisfaction and experience during the treatment course. Our feedback form included both objective and open ended questions to better assess the overall experience of patients during their hospital stay. Also we designed the feedback form in such a manner that it included questions from each and every aspect of patients treatment process, starting from the experience at the registration counter during admission to the ward environment and cleanliness, information and consultation provided by the surgeons, the care and support provided by the clinical and nursing staff, the quality of food being served to the patients and the availability of medicines and lab investigations in the hospital.

We also included two open ended questions to better allow the patients to express their experience during the treatment course.

In our study we found no correlation between the age and gender of the patient, and the overall satisfaction during the treatment. A similar position on this issue was presented by other authors who argue that patient satisfaction with treatment depends on individual characteristics such as age, gender, education, as well as the physical and mental condition [6- 9].

Also the patient satisfaction was not associated with the type of disease, (benign vs malignant) and the type of management patient underwent in the hospital, (surgical vs conservative). Patient who underwent surgical management of their disease, the satisfaction was not related to the type of surgery, i.e. laparoscopic or open procedure.

We found no correlation between the post operative complication and the length of stay of the patient, with the satisfaction score. This signifies that a patient who has been well explained about the procedure and its related complications pre-operatively as well as post-operatively, if developed a procedure related complication which was managed properly had

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same level of satisfaction to the patient who did not have any complication during the post-operative period.

The strengths of using a questionnaire-based survey to study patient experience lies in that it utilizes a validated tool that can be relatively quickly and cheaply administered to large numbers of people, generating generalizable and easily analysed data that can be tracked over time and compared with other centres [10]. However, relying on questionnaires alone may result in the collection of only superficial data, with depth and nuance lost in attempting to reduce the complexity and diversity of experiences encompassed in one patient episode into simple, closed generalizable questions [11].

There are studies assessing the quality of information available for patients and their impact on satisfaction, overall experience and post-operative recovery in various other fields of surgery [12-14]. But no studies are available which assess these parameters in patients with gastrointestinal and hepato-pancreatico-biliary diseases undergoing major surgeries and requiring prolonged hospital admission.

Traditional methods of evaluating clinical outcomes, such as complication rates, length of stay and 30-day mortality, have an important role in evaluating outcomes, but it is crucial to recognise their limitations. Traditional methods are limited in the scope of what they measure and what is consider to be a "poor outcome'. Lack of morbidity and mortality is not an adequate surrogate measure for good care. A patient may have technically perfect surgery, a prompt discharge and suffer no complications but spend their time in hospital frightened and anxious, being cared for on a dirty, noisy ward by an indifferent clinical team without any explanation or involvement in the decisions around their care. Arguably that patient has received poor care, but would have had a "good" outcome according to traditional measures. Using patient experience as an outcome measure allows for a more holistic and patient-centred evaluation of service delivery, and highlights ways of improving care in a way that matters to patients. Patient experience measures have been shown to be robust, distinctive indicators of healthcare quality [15], and have been successfully used to drive local improvement strategies across a number of healthcare settings. A study assessing the factors influencing day surgery patients' quality of postoperative recovery and satisfaction concluded that involving patients in shared decision-making (SDM) and providing sufficient preoperative and postoperative information can improve their satisfaction. Anaesthetists and nurses at the day surgery unit also play an important role in detecting factors that can negatively influence patients' postoperative recovery [16].

The results of our study are also in congruity with the above studies and underscores the importance of patient care in a holistic manner. The information provided to the patient and relatives regarding their management process, the time given by the treating surgical team for consultation and examination of the patient, the overall cleanliness of ward and the care provided by the nursing staff were the factors strongly associated with the better overall satisfaction and experience of the patient during their hospital stay. With a continuous feedback from the patient in the form of a well-designed feedback form we can better assess the quality of care provided to the patients and can do the required changes to further improve the patient satisfaction and experience.

6. Conclusion

Admission in a health care facility for the management of surgical disease presents various physical, psychological and emotional challenges and impacts the overall satisfaction and experience of the patient and relatives. A well designed feedback form can be used as a tool to assess and improve the patient satisfaction and experience during the peri-operative period. The clinical outcomes alone are not an indicator of patient's experience during his or her

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hospital stay. Hence a well-designed feedback form including factors other than the clinical outcomes leads to a more complete assessment of patient satisfaction and experience.

Ethical Approval:

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

Consent

As per international standard or university standard, Participants' written consent has been collected and preserved by the author(s).

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