

Satisfaction Measurement for in-hospital Services among Permanent Pacemaker Implantation Patients: A Pilot Study in Selected Hospital in Kolkata

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ABSTRACT

This study aimed to measure the satisfaction, as perceived by permanent pacemaker implantation (PPI) patients during stay in a selected hospital Kolkata. A non-experimental purposive sampling was chosen for selecting study participants. Moreover a qualitative cross sectional survey was conducted from the patients who were admitted in hospital for 1st time PPI. A semi-structured interview questionnaire was framed on the concept of SERVQUAL model, based on five areas, namely, assurance, tangible, reliability, responsiveness empathy, and the reliability. Data were collected from 27 selected participants who were staying hospital at least 3 days in male and female cardiology ward. Another qualitative interview captures five questionnaire was asked from study participants. In consideration of the level of patient satisfaction, majority (i.e., 55.65%) of the participants are satisfied. In case of highly satisfied and low satisfied group, it is quite low, that is, 22.22% for each group. It is also found that areas of assurance and responsiveness need some more attention from health professional so that patients may get confidence. A framework based on qualitative responses is proposed for further scope of improvement of the hospital services.

Keywords: Health services, Patient satisfaction, PPI patient, Qualitative interview, SERVQUAL

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INTRODUCTION AND BACKGROUND

Health-care organizations are responsible to provide need-based services to the patients in both outpatient and inpatient departments. Continuous hospital quality service may enable the satisfied outcome for patients in both departments. We know that there are different kinds of people, coming to hospital for the treatment of non-communicable and communicable diseases. However, these services may vary from hospital to hospital specifically in developing country.^[1] Due to these variations, sometimes patients face unwanted conditions and situations. According to the World Health Organization estimation, there are 41 million cases are died annually from non-communicable disease. Among them, majority of patients, that is, 17.9 million are died annually due to cardiovascular problem.^[2] Cardiac diseases are leading cause of burden and death globally and it is exponentially increasing in India as well.^[3] There are couple of modern medical treatment for cardiovascular problems. Permanent pacemaker implantation (PPI), a minimal invasive procedure for the patient having problem with conduction system of heart, is one of the prominent surgical interventions. Through PPI procedure, patient may get recover from their symptoms for which they were unable to lead their normal life.^[3] Furthermore, patient may survive from their restrictions before PPI and improve their physical health, emotional health, and social functioning. It is also mentioned that each year 1.25 million permanent pacemakers are implanted worldwide.^[4] It is also observed that most of the PPI survivors are conscious after operation as there is a minimal chance of developing complications.^[5]

It is observed that hospital service plays an important role to cure PPI patients. Sometimes, PPI patients may face some problems due the lack of proper infrastructure and other related issues of doctors, nurses and other hospital staff members.^[6] It is also mentioned that health care providers may satisfy main beneficiary on several factors, such as promptness of service, clear

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explanation and available information of treatment to achieve client's emotional feelings toward health-care system. However, other related issues, such as cleanliness, good interpersonal relationship having broad importance to quality health, may not be ignored.^[7] Some of these problems regarding care and services may essentially be identified to fill up the gap within the organization and hence, the hospital may be capable to combat with competitive market. This suggests that there is a need to study the hospital service experience perceived by patients, who are able to judge or evaluate the level of hospital service during their staying in hospital.

Though, patients are very much conscious nowadays and they sometimes evaluate the performance of hospital for every dimensions of services.^[8] Keeping this in mind, a questionnaire is prepared based on SERVQUAL model^[9] and distributed to willing patients. The objectives of the present study are (i) to analyze reliability of questionnaire, (ii) to estimate perceived experience regarding hospital service, and (iii) to find out the association between perceived experience and selected demographic variable.

METHODOLOGY

The present non-experimental cross-sectional study deals with PPI patient to survey the perception regarding their satisfaction towards health services from male and female Cardiology Ward in a selected hospital at Kolkata. After getting permission from the Ethical Committee, the study was carried out in the month of March 2022. In this study, 27 PPI patients were selected as participants using non-probability purposive sampling technique. Informed written consent was taken from each of the willing participants and then descriptive survey research design was pursued by self-administered questionnaire, which was developed based on SERVQUAL model having five distinct dimensions, namely, tangible (9 items), reliability (5 items), responsiveness (4 items), empathy (3 items), and assurance (5 items). Each of these items of total structured questionnaire was framed by 5-point Likert Scale. Along with this, socio-demographic survey was conducted by using a semi-structured questionnaire. Thus, the total survey study was divided into two parts, namely, Tool I (i.e., for socio-demography) and Tool II (i.e., for Perception of hospital services) and translated in Bengali language, vetted by a reputed linguistic expert.

On each day of data collection, researcher went to Cath Laboratory and noted all the information, such as name, age, name of prescribing doctor, detailed diagnosis, type of PPI, and ward name. Along with this, only those patients were selected as participants, who were undergone first time with PPI. After visited to Cath Laboratory, interviewee went to each respective cardiology ward and restricted to go to CCU, ITU, if any. It is worth mentioned that only hemodynamically stable PPI patients were selected randomly as participants. From cardiology ward, each PPI patient's data were gathered, but questions of Tool II were asked from those who had received at least 3-day services from respective ward. At the end of the data collection using tool I, II interviewer was started qualitative interview using open ended questions to participants and they were allow to give free and frank responses about their satisfaction towards hospital services. In this way, the total data collection was completed.

Data were arranged and analyzed by descriptive and inferential statistics. Participants background information was described through frequency (f), percentage (%), mean, standard deviation (SD), whereas SERVQUAL tool was computed by mean, SD, mean % to obtain patient satisfaction. To find out the association between different demographic variables and response, Chi-square statistics were calculated.

RESULTS AND DISCUSSION

Participants of this study have quite diverse characteristics. The background information is collected from each participant in terms of their age, gender, education, occupation, economic class, number of visits to hospital, and cost of visit.

The summary of socio-economic data is represented in Table 1 and it shows that the majority (i.e., 48%) of participant's age were lying between the age of 55 to 65 years and more than 50% participants were female. It may also be depicted that 70% of participants hold up to class 8 standard educational-level and only 11% of them were graduate. As far as occupation is concern, majority, that is, 26% of participants belonged to home maker/ housewife, and maximum (i.e. 67%) participants were in the upper class in terms of economic class. It is also observed that among 27

participants, 56% of them visited hospital at 1st time. It is to be kept in mind that cost of visit is an important area to be considered. Table 1 shows that majority (i.e., 41%) participant's expenditure for 1st-time visit to hospital was ≤Rs. 1000/-.

Regarding reliability and consistency of questionnaire, a Cronbach's Alpha (α)^[10] for each dimension was computed and presented in Table 2. It is found that the estimated value for α is ranged from 0.54 to 0.9. Thus, it may be concluded that in this pilot study, internal consistency is excellent in the areas of responsiveness, empathy, reliability, and acceptable for the attributes of assurance. On the other hand, the internal consistency is poor (i.e., $\alpha = 0.54$) in case of tangibility. Thus, it may be decided that the questions in this dimension need to be critically analyzed, framed and hence, be modified in final study. However, the overall internal consistency of the questionnaire is excellent (0.89).

Table 3 describes that 55.56% among 27 patients are satisfied and only 22.22% are highly satisfied.

In the area of ranking, it is observed in Table 4 that the attributes, that is, tangible, reliable, and empathy are equally on

Table 1: Socio-demographic information of the participants n=27

Range	f	%
Age		
35-45	3	11
45-55	2	7
55-65	13	48
65-75	7	26
75-85	2	7
Gender		
M	12	44
F	15	56
Education		
No Formal education	7	26
Upto class VIII	12	44
Class IX-XII	5	19
Above XII	3	11
Occupation		
Business	7	26
Daily labor	6	22
House wife/home maker	7	26
Service	6	22
Unemployed	1	4
Economic class		
Upper class	18	67
Upper middle class	9	33
Middle class	-	-
Lower middle class	-	-
Lower class	-	-
No. of visit to hospital		
1 time	15	56
>1 time	12	44
Cost for visit		
1000	11	41
1001-3000	10	37
3001-5000	4	15
>5000	2	7

Bold Values are Highest Values

Table 2: Reliability test n=27

Attributes	No. of items	Cronbach's alpha
Responsive	4	0.9
Empathy	3	0.86
Reliability	5	0.80
Assurance	5	0.67
Tangibility	9	0.54
Overall	26	0.89

Table 3: Level of patient satisfaction of the participants n=27

Score: level of satisfaction	Grading	f	%
113 (mean+SD)	Highly satisfied	6	22.22
85-113	Satisfied	15	55.56
<5.5	Low satisfied	6	22.22

Table 4: Mean percentage n=27

Areas	Range of possible score	Range of obtained score	Mean	SD	Mean %
Tangible	9-45	29-44	36	4.1	80
Reliable	5-25	12-25	20	3.8	80
Responsiveness	4-20	4-20	14	4.7	68
Empathy	3-15	6-15	11.9	2.97	79.5
Assurance	5-25	12-21	17	2.85	70

Table 5: Association between selected variable and patient's satisfaction n=27

Demographic Variables	≤Median score	>Median score	df	Chi-square/ yates correction value	P-value
Age					
<60	6	8	1	0.98	0.32
>60	9	4			
Gender					
M	4	8	1	2.84	0.92
F	11	4			
Education					
No formal education	4	3	3	0.26	0.96
Up to class VIII	8	4			
Class IX-XII	1	4			
Above XII	1	2			
Occupation					
Employed	9	10	1	0.74	0.39
Unemployed	6	2			
Economic class					
Upper class	11	7	1	0.16	0.69
Upper middle class	4	5			
Cost for visit					
<3000	14	7	1	4.73	0.29
>3000	1	5			

same rank as the basis of mean % value, which is 80% whereas responsiveness and assurance are having mean percentages of 68% and 70%, respectively. It indicates that for patient satisfaction as well as quality improvement in relation to tangible, reliable, and empathy is more or less equal importance^[11] but we should not ignore other attributes, that is, responsiveness and assurance.

It is observed from Table 4 that the two areas, that is, assurance and responsiveness are needs to be improved. In this context, Figure 1 shows the ways of improvement areas by the help of qualitative interview from participants. But other three areas (reliability, empathy, and tangible) are nor highlighted in Figure 1 as the mean percentage of those areas was quite satisfactorily high.

Another area as represented in Table 5, that is, H₀ is accepted and research hypothesis is rejected in this pilot study that means there is no association present with patient satisfaction and selected variables.

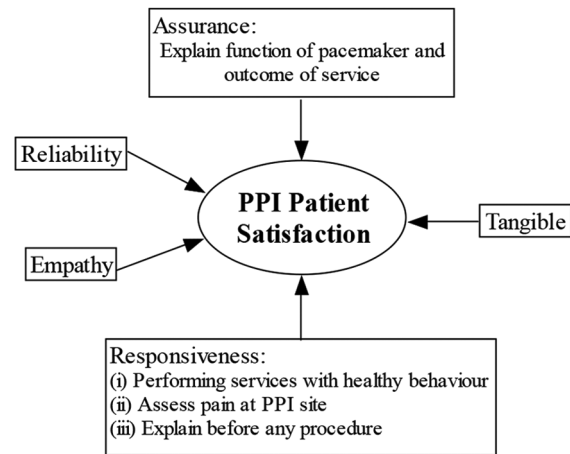


Figure 1: Proposed framework: Recovery the gap on the area of assurance and responsiveness

CONCLUSION

A pilot study has been undertaken to study the satisfaction among PPI patients in a selected hospital in Kolkata. In this study, a questionnaire has been framed based on SERVQUAL model. The questionnaire, having 26 items, is used to collect data from 27 PPI patients. It has been observed that overall 55.56% patients are satisfied and 22.22% are highly satisfied.

The present study needs to be conducted further by collecting more data from PPI patients. Furthermore, advanced statistical data analysis may be used for better inference.

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