RESEARCH ARTICLE

Gap Analysis between Patients' Expectations and Services Provided by Pharmacy Store of a Tertiary Care Hospital

[1]Jharna Bajpai, [2]Nirmal K Gurbani

ABSTRACT

Pharmacy store of hospital is among one the major revenue generating area of hospital. Its performance can be a vital element in the success of any upcoming hospital. Nowadays, not only the availability of prescribed drugs matters but explanation of dose, frequency and duration of drugs to be taken, behavior of pharmacist and waiting time to get drugs play an important role in satisfaction of patients. The pharmacy store of the hospital provides more specialized and more time-saving services for patients. It also eases the financial burden on pharmacy users via drug discounts. A cross-sectional comparative study was conducted on 90 respondents. A self administered pre-designed, pretested, structured questionnaire was given to selected respondents on first contact to the pharmacy store of the hospital with the aim to study the perception of patients and hospital on various parameters. Seventy-one percent respondents appreciated the accessibility to pharmacy. When segregated by sociodemographic characteristics females showed greater level of satisfaction than males, respondents above 50 years of age, respondents who were unmarried, those who had came for a follow-up were most satisfied with services. Eighty-six percent respondents appreciated the politeness in communication by pharmacists. There was some discordance between the perception of patients and the perception of hospital in accessibility to pharmacy. A large number of respondents were satisfied with clarity and brevity of information given by pharmacy staff, the presence of pharmacist, and availability of prescribed drugs.

Keywords: Patient satisfaction, Pharmacy store, Tertiary care hospital, Perception of patients, Perception of hospital management.

[1]Quality Executive, [2]Professor

[1]Bhagwan Mahaveer Cancer Hospital and Research Center (BMCHRC), Jaipur, Rajasthan, India

[2]Department of Pharmaceutical Management, Institute of Health Management and Research, Jaipur, Rajasthan, India

Corresponding Author: Jharna Bajpai, Quality Executive 59, Devi Path, Near Soni Hospital, JLN Marg, Jaipur-302004 Rajasthan, India, Phone: +918290598300, e-mail: drjharnabajpai@gmail.com

INTRODUCTION

In recent years, awareness has risen on how patients perceive the quality of their healthcare. Consequently measuring patient satisfaction has become an important tool to gain attention and value among the healthcare consumers as well as competitors. Measuring patient satisfaction encompasses evaluating patient's perceptions and determining whether they felt that their needs met.[1] Research in the area of 'Hospital Administration in India' is still in its infant stage. To mention a few important research works carried out in India, a reference can be made to Sreenivas[2] who examined why the hospital administrator should take patient-satisfaction seriously as a measurement. He further explained the methodology to evaluate the patient satisfaction. The patient satisfaction is the real testimony to the efficiency of hospital administration. Satisfaction or dissatisfaction refers to emotional response to the evaluation of services, consumption and experience. As the hospital serves all the members of the society, the expectations of the users differ from one individual to another individual, because everyone carries a particular set of thoughts, feelings and needs. Hence, determination of patients' real feelings is very difficult. It is the responsibility of the administrator to put himself in patient's shoes (empathy). Patients from certain expectations prior to the visit. Once patients come to the hospital and experience the facilities, they may then become either satisfied or dissatisfied. The concept of patient satisfaction is rapidly changing to customer's delight which means the patient is not only cured of his ailments but is also pleased with the amenities provided to him by the organization and its staff. The role of manpower does play a very important role in patient satisfaction. A medical institute is a complex organization and every employee directly or indirectly involved in rendering services is important for the patient.[3] The healthcare system is basically a service based industry and customer satisfaction is of the utmost importance just as in other services-oriented systems.[4] The Maslow's theory of hierarchy of needs is famous theory which says that man is wanting animal and his motives go on changing. The fulfilled motive no longer remains a motive; once one's need is fulfilled the other takes the place.[5]

Pharmacy store of the hospital constitutes one of the largest revenue generating area of a hospital. The

performance of the pharmacy department can be a vital element in the success of a hospital. The high cost of medications and drug-related technology, combined with the potential impact of medications and pharmacy services on patient-care outcomes and patient safety make it imperative that pharmacy departments perform at the highest level possible. However, the increasing complexity and range of medicines and a greater awareness of medication errors have facilitated a change toward a patient-centered role.[6]

The pharmacy store provides more specialized and more time-saving services for patients. It also eases the financial burden on pharmacy users via drug discounts. Aside from the money saved on travel, the pharmaceutical costs may also be reduced. The pharmacy store of the hospital benefits the patients by making available the prescribed drugs, thus helping the patients to avoid the difficulties in gathering drugs from various outside pharmacy stores. As prescribing preferences are different at different places, the prescribed medicines may not be available at many places, but is definitely available in the pharmacy of the hospital from where the prescription is generated.

As pharmacy is the exit point of hospital, patients wish to get the drugs as early as possible to get relief from their sufferings. Long waiting time, nonavailability of drugs, contributes to dissatisfaction and ultimately the reputation of the hospital gets tarnished. Nowadays, not only the availability of prescribed drugs matters but also the explanation of dose, frequency and duration of the treatment by the pharmacist, behavior of pharmacist and waiting time to get the drugs play an important role in satisfaction of patients. Thus, there was a need of an evaluation tool which identifies the gap between the patients' expectations and the services provided by the pharmacy store of the hospital and to suggest measures to fill the lacunae. The present study aims to identify gaps between patients' expectations and services provided by pharmacy of tertiary care hospital and to determine the impact of various sociodemographic factors on the level of satisfaction.

MATERIALS AND METHODS

Research Design

The present cross-sectional study was conducted among patients and patients' attendants attending the pharmacy store of a tertiary care hospital in Mumbai. The period of this study was 2 months (April 2013-June 2013). One month was devoted for data collection. On an average, 5 patients/attendants were interviewed per day, so 25 × 5 = 125 questionnaires were filled. Out of those, only 90 questionnaires were found to be completely filled, i.e. the response rate was 72% and incomplete response rate was 28%. Incomplete questionnaires were discarded and not incorporated

in the data entry and analysis, therefore sample size was restricted to 90 only. Remaining 1 month was given for data compilation, data analysis, drawing conclusions and recommendations.

Tools and Techniques

Respondents were selected by 'convenient sampling' technique. The research tool was a structured, self-administered bilingual questionnaire. For the validity and reliability of questionnaire, pre-test on questionnaire was conducted on 30 patients in the hospital (study site). The Cronbach's alpha was applied for reliability analysis of the questionnaire for satisfaction and value resulted to be 0.77. According to this result, some questions were rewritten to eliminate ambiguity. Nominal scale and Likert five points scaling was used for measuring the satisfaction level. The rating was done as following:

5: extremely satisfied, 4: very satisfied, 3: satisfied, 2: not satisfied, 1: dissatisfied. The difference between 1: dissatisfied and 2: not satisfied is on the basis of: non satisfied leaves open the possibility of eventually being satisfied, as some scope is there to achieve satisfaction. Dissatisfied implies that they could not be satisfied, a failure to make them satisfied. If any respondent got confused between 'not-satisfied' and 'dissatisfied', he was explained the difference between the two options.

The instrument was given to the patients and patients' attendants on their entry to the pharmacy. The respondents filled the questionnaire on the basis of their perception and simultaneously another set of questionnaire was being filled by the observer who judged the services and pharmacy staff to compare patient satisfaction with our observations, as per the parameters finalized by the hospital itself which are as under:

For accessibility to pharmacy:

5: distance should be covered in less than 3 minutes

4: distance should be covered in 3 to 5 minutes

3: distance should be covered in 5 to 8 minutes

2: distance should be covered in 8 to 10 minutes

1: distance should be covered in more than 10 minutes

For waiting time to get the medicines:

5: waited for less than 5 minutes

2: waited for 5 to 10 minutes

3: waited for 10 to 15 minutes

4: waited for 15 to 20 minutes

5: waited for more than 20 minutes

The criteria for politeness of communication of staff were as follows:

One mark each was awarded for each of the following gestures done:

• The pharmacy staff must greet the patient

- A welcoming smile should be rendered
- They should be attentive to the queries of patient
- Quality of voice tone should be mild
- If they are asking the patient to wait, define a time limit. The criteria for clarity and brevity of information by the staff were as follows:

One mark each was awarded for each of the following gestures done:

- Prompt response to the queries.
- If the answer given by the staff is specific and to the point.
- If the answer given by the staff in the language the patient understands.
- Non involvement of the staff in unnecessary communication with the patient.
- Use of nonmedical terminologies while explaining the drugs to the patient.

By this technique, it became possible to compare patient's expressed satisfaction with the observation. Apart from these parameters, remaining questions were to be answered in either 'Yes' or 'No', so there was no need of any set criteria. They were to be seen on the spot.

Ethical Considerations

The institutional Ethical committee approved methodology and data collection procedure of the study. Participation was purely voluntary for the respondents. A patient attending the out patient department pharmacy and having age above 18 years was included in the study after taking informed consent. No pressure or inducement of any kind was applied to encourage an individual to become included in the study. Before participation, all respondents were notified about the study's aim, objectives and methods. Any patient had the right to abstain from participation or to terminate participation at any time. The identity of individuals from whom information is obtained in the course of the study was kept strictly confidential. No information revealing the identity of any individual was included in the final report or in any other communication prepared in the course of the study. Patient working in the healthcare facility and patients with serious physical or mental pathologies, such as terminal disease and psychosis were excluded from the study.

Statistical Methods

Data were analyzed using the SPSS statistical software program version-16. First, the mean, median, mode, standard deviation was calculated, and then test of significance applied to calculate the p-value at the 95% confidence interval. To find out the correlation between the perception of patients and perception of hospital, the Karl Pearson's correlation coefficient was calculated.

RESULTS

Results are presented in Tables 1 to 4, followed by interpretations as under:

Ninety-five percent respondents appreciated the availability of prescribed drugs. Less than 50% respondents appreciated the explanation of dose, frequency and duration of drugs and 56% respondents appreciated explanation of intake of drugs in the language patients' understand. Sixty-eight percent showed satisfaction with waiting time to get the drugs.

On segregation according to sociodemographic characteristics, females were found to be relatively more satisfied with the services of pharmacy than males, respondents above 50 years of age showed higher satisfaction than those belonging to age group 18 to 50 years. Respondents having academic qualification below X standard were relatively more satisfied than those who had gone to senior secondary school, graduates and postgraduates. Unmarried respondents showed greater level of satisfaction than married respondents. Degree of satisfaction in decreasing order was found from organization, insurance and self finance in terms of medical expenses borne by the respondents. Cross tables were made and test of significance was applied to various determinants. It showed statistical significant association of

Table 1: Sociodemographic distribution of respondents in a tertiary care hospital

Variables	Percentage of respondents (N = 90)
Gender	
Males	53.3
Females	46.6
Age group	
18-50 years	88.8
Above 50 years	11.1
Educational qualification	
Postgraduates	34.4
Graduates	43.3
Up to senior secondary	10.0
Below X standard	12.2
Marital status	
Married	74.4
Unmarried	25.5
Medical expenses	
Organization	13.3
Insurance	26.6
Self finance	60.0
Socioeconomic status	
Below ₹ 20000/month	17.7
₹ 20000-50000/month	41.1
Above ₹ 50000/month	41.1
Type of consultation visit	
First visit	54.4
Follow-up	45.5

Table 2: Frequency and percentage distribution of satisfied respondents with various parameters of pharmacy

Parameters	Frequency of satisfied respondents (N = 90)	Percentage of satisfied respondents (N = 90)
Signage to pharmacy	67	74.4
Accessibility to pharmacy	64	71.1
Satisfaction with waiting time to get drugs	61	67.7
Politeness of communication of pharmacy staff	77	85.5
Clarity and brevity of information given by pharmacy staff	78	86.6
Presence of pharmacist	80	88.8
Availability of prescribed drugs	85	95.0
Explanation of dose, frequency and duration of drugs to be taken	48	53.4
Explanation of intake of drugs in the language patients understand	50	56.0
Warmly reception at the pharmacy counter	70	78.0

Table 3: Frequency and percentage of satisfied respondents according to sociodemographic characteristics

Variables	Frequency of satisfied respondents	Percentage of satisfied respondents
Gender		
Males (N = 38)	31	81.5
Females (N = 42)	34	80.9
Age		
18-50 years (N = 64)	45	70.3
Above 50 years (N = 26)	21	80.7
Academic qualification		
Postgraduates (N = 31)	13	41.9
Graduates (N = 39)	20	51.3
Up to senior secondary (N = 09)	3	33.3
Below X standard (N = 11)	9	81.8
Marital status		
Married (N = 67)	41	61.2
Unmarried (N = 23)	18	78.2
Medical expenses		
Organization (N = 12)	9	75
Insurance (N = 24)	16	66.6
Self finance (N = 54)	33	61.1
Socioeconomic status		
Below ₹ 20000/month (N = 16)	8	50
₹ 20000-50000/month (N = 37)	28	75.6
Above ₹ 50000/month (N = 37)	22	59.4
Type of consultation visit		
First visit (N = 49)	39	79.6
Follow-up (N = 41)	36	87.8

Table 4: Relation between perceptions of patients and hospital

Parameters	Karl Pearson's correlation coefficient
Accessibility to pharmacy	−0.41
Satisfaction with waiting time to get drugs	0.65
Politeness of communication of pharmacy staff	0.80
Clarity and brevity of information given by pharmacy staff	0.84

satisfaction with waiting time to get the drugs with gender and type of consultation visit.

Karl Pearson's correlation test has been applied on four parameters to find out the relation between the perceptions of patients and perceptions of hospital (*see* Table 4). This test was applied to find out the correlation between two sets of data (perceptions of patients' and perceptions of hospital) and to measure how well these two are related. The perception of hospital was judged on the criteria discussed under section: tools and techniques and the perception of patients' were decided by the responses filled by the patients in the questionnaire.

There was some discordance between the perception of patients and perception of hospital in accessibility to pharmacy as a low negative relationship occurs between the two. A negative correlation indicates that high scores in one data set are associated with low scores in the other data set. This means that the hospital perception and patients' perception for accessibility to pharmacy is different. In remaining other services of pharmacy, concordance was there. A positive correlation indicates that same scores have been imparted to both the variables. For waiting time to get the drugs, a positive correlation exist, the criteria set by hospital for waiting time to get the drugs and the perceptions of patients' stood together which means the responses filled by the patients are related to the criteria set by hospital.

DISCUSSION

Over the last two decades, the role of the pharmacist has changed. The new role has evolved from the traditional activity of mere dispensing medications to broader responsibilities of pharmaceutical care.[7] Pharmaceutical care requires a much more intimate and intensive relationship between the pharmacist and patient than simple pharmaceutical dispensing.[8] Seventy-one percent respondents appreciated the accessibility to pharmacy. This study is consistent with the study conducted by KS Prasanna et al.[9] In their study, the results of this finding were approximately 80%. Around 52% respondents appreciated the explanation given by the pharmacist of dose, frequency and duration

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Table 5: Comparison of the findings reported in the literature with this study

Parameters	KS Prasanna et al	EPY Muhondwa	PR Sodani et al	John Paul T Cuevas	Present study
Satisfaction with accessibility to pharmacy	80%	-	-	-	71%
Satisfaction with explanation given by the pharmacist of dose, frequency and duration of drugs to be taken	86%	-	-	-	52%
Satisfaction with waiting time to get medicines	53%	69%	-	-	67%
Satisfaction with politeness of communication of pharmacy staff	-	-	70%	-	86%
Satisfaction with warmth of reception	-	-	70%	-	78%
Satisfaction with the availability of prescribed drugs	-	-	-	40%	95%

of drugs to be taken. This observation is different with the study conducted by KS Prasanna et al[9] showing to this as 86%. Around 67% respondents appreciated waiting time to get medicines, this observation when compared with those reported by KS Prasanna et al shows satisfaction to be 53%.[12] In another study conducted by EPY Muhondwa et al, around 69% respondents were satisfied with the waiting time.[10] Approximately 86% respondents appreciated the politeness of communication of pharmacy staff and 78% appreciated warmth of reception at the pharmacy counter. This observation is consistent with the study conducted by PR Sodani et al.[11] Around 95% respondents were satisfied with the availability of prescribed drugs, which is in contrast to the study conducted by John Paul T Cuevas, who found around 40% of the respondents to be satisfied.[12] A comparative picture of above mentioned studies with this study is summarized under Table 5.

Consistencies and variability in data suggest that parameters for satisfaction of patients cannot be generalized and these would vary from situation to situation besides impact of various socioeconomic, cultural and geographical aspects. It is commonly believed that satisfaction with healthcare may be dependent upon variables, such as social class, marital status, gender and in particular age group.[13] There was statistical significant association between waiting time to get drugs and gender,[14] males were more apprehensive, the reason behind this could be that they want to get themselves free from the hospital as soon as possible so that they get involved in other tasks. Also a statistical significant association was seen between type of consultation visit and waiting time as the ones who came for follow-up became more acquainted with the waiting time. A statistical significant relationship also occurred between politeness of communication of pharmacy staff and patients who came for a follow-up. The reason could be that the patients who visited for a follow-up might become acquainted with the communication of staff and had an image in their mind about their communication skills as compared to the ones who came for the first time. There has

been no study conducted yet to assess the relation between the perception of patients and perception of hospital.

CONCLUSION

The study showed that a large number of respondents were satisfied with clarity and brevity of information given by pharmacy staff, the presence of pharmacist and availability of prescribed drugs. Not much respondents responded positively for waiting time to get the drugs. This should be aimed to attain maximum satisfaction as no customer likes to wait in service industry and hospital is no such exception. Around 50% respondents showed satisfaction with explanation of dose, frequency and duration of drugs in the language, the patients' understand, the hospital should provide necessary training to its concerned staff for improving the satisfaction level of patients. The assessment between perception of patients and perception of hospital showed that hospital considered the location and accessibility of pharmacy to be satisfactory, but in reality, the respondents were not satisfied with this. This should be worked upon either by the hospital on the basis of detailed analysis of responses from not satisfied and dissatisfied categories.

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