Responsiveness of Staff Members at Public Health Care Institutions in Kerala: An Assessment of Patients' Viewpoint

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The promptness in willingly providing a service, i.e., the degree of responsiveness shown by the staff members is an important parameter used by a customer to judge the quality of services offered by a hospital. We often hear the patients complaining about the doctors, nurses and support staff at government hospitals being hesitant to provide timely care thus making them unhappy with the same. An examination of the patents' perception using factor analysis and regression analysis showed that majority of the patients were happy with the responsiveness of staff members at government hospitals across Kerala.

Key Words: intangibility, promptness, responsiveness, service quality

1. Introduction

Employees in service industries have a significant role in determining customer satisfaction. Employees have an increasingly important role in driving organizational performance. One of the most important ways that employees affect performance is in their interactions with customers. In the globalized and liberalized business environment, service sector is encountering stiff competition to meet the requirements of the profitable ways of business. It appears that the driving force towards success in service business is the delivery of high quality service (Thompson et.al. 1985). In the era of increased competition, enhancement of service quality and its measurement is one of the significant issues for developing efficiency and the growth of business (Anderson & Zeithamal 1984, Babakus & Boller, 1992 and Garvin, 1983).

In the service sector, the health care industry, one of India's largest sectors in terms of revenue and employment which is growing at a rapid pace. In India, the service quality of health care is miserable and in general, the health outcome is far from satisfactory (Bajpai & Goyel, 2004). As in the case of other industries, in the health care sector also, customer satisfaction is an important issue (Shabbir et.al. 2010). A health care organization can achieve patient satisfaction by providing quality services keeping in view patients' expectation and continuous improvement in the health care service (Zineldin, 2006). The extent of responsive behaviour showcased by the hospital staff is a prominent factor determining the satisfaction level of patients with the kind of services offered by hospitals. In the present study, an attempt is made to assess the perception of patients about the responsiveness of staff members at government hospitals in Kerala with the help of SERVQUAL model.

2. Review of Literature

Newman et.al. (2001) opined that customer service is a prerequisite for customer satisfaction. The value of service consists of eight dimensions viz. reliability, assurance, access, communication, responsiveness, courtesy, empathy, and tangibles (Brown, 1997; Caruana & Pitt, 1997; Homburg and Garbe, 1999; Clemes et al., 2001; Sower et al., 2001; Yang et al., 2003).

Patients, in general, receive various services of medical care and judge the quality of services delivered to them (Choi et al., 2004). During 2004 and 2005, a focus group interview was conducted by the Agency of Health Care Research and Quality and Centers for Medicare and Medicaid Services (CMS) to find out how patients perceive the quality of health care. In this study it was observed that patients, usually, preferred four qualities of health care services viz. doctor communication skill, responsiveness of hospital staff, comfort and cleanliness of the hospital environment and communication of nursing staff (Safavi, 2006).

Babakus and Mangold (1992) identified SERVQUAL as a reliable and valid model in the hospital environment. O'Conner et.al. (2001) found SERVQUAL instruments suitable to analyze the perceptual gap in understanding patient expectation among health care stakeholders. SERVQUAL was found to be a useful model to measure the differences between patients' preferences and their actual experiences. Qin and Prybutok (2009) mentioned all the five dimensions of the service quality in SERVQUAL instrument are significant and reliable in a health care setting.

The above literature clearly indicates the significance of responsiveness of staff members in enhancing patient satisfaction as well as the use of SERVQUAL in measuring the same.

3. Significance of the Study

Every organization, irrespective of whether it is in manufacturing or service sector, has to ensure that their customers are satisfied to the fullest to be successful in the long run. While the quality of the end product is a major determinant of customer satisfaction with products, the excellence in provision of services by the staff members is the primary determinant of customer satisfaction in case of services. Along with other dimensions of service quality, the speed and efficiency with which the staff members respond to the needs and requirements of patients or in short their responsiveness is a key aspect that

influences their satisfaction with service quality. Being a service organization, all this is applies to hospitals. So, it is very important for hospitals to have a clear picture of the patients' perception regarding the responsiveness of staff members. Hence, the present paper is an attempt to take a deeper look at the patients' perception regarding the responsiveness of staff members at government hospitals in Kerala.

4. Methodology

The researcher followed a descriptive approach in conducting the study. Data were collected from inpatients at various districts and general hospitals across Kerala. A structured questionnaire was administered among a sample of 330 patients identified at the convenience of the researcher from various government district hospitals across Kerala .The questionnaire was designed in such a way that the opinion of respondents on various aspects relating to tangible elements were sought.

The collected data was then analyzed using factor analysis. Factor analysis tries to bring inter-correlated variables together under more general, underlying variables. More specifically, the goal of factor analysis is to reduce "the dimensionality of the original space and to give an interpretation to the new space, spanned by a lower number of new dimensions which are supposed to underlie the old ones" or to explain the variance in the observed variables in terms of underlying latent factors (Rietveld & Van Hout, 1993). In the present paper, factor analysis was done to identify the key variables impacting the satisfaction of patients with physical environment or tangible elements at government hospitals and to group them into certain factors based on common properties.

The factor scores thus obtained were then subjected to multiple regression analysis. Multiple regression is a statistical technique that allows us to predict the value of one variable on the basis of values of several other variables. There will be two set of variables – predictor variables which are helpful in predicting the values of other variables and the criterion variables for which the values are predicted based on the values of predictor variables. This statistical technique can be used while exploring linear relationships between the predictor and criterion variables. Multiple regression analysis helps us to understand the significance level of different dependent variables in relation to one or more independent variables and also to identify the most significant factor(s) (Brace et al, 2006). In this paper regression analysis was performed to find out whether there existed significant difference in the perception of male and female patients regarding responsiveness of staff members at government hospitals in Kerala.

5. Results and Discussion

Table 1 *Patients: Responsiveness of Staff Members: KMO and Bartlett's Test*

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.662
Bartlett's Test of Sphericity	Approx. Chi-Square	147.289
	Df	21
	Sig.	.000

Source *Survey Data*

The KMO test is conducted to assess the adequacy of a given sample. KMO value varies between 0 and 1. A value of 0 indicates that factor analysis is inappropriate for the data and a value of 1 indicates that factor analysis will yield distinct and reliable results. A value of 0.5 or above means that the sample is adequate and we can proceed with factor analysis whereas if it is below 0.5 we have to collect more data (Field, 2000). As seen in Table 1 the KMO value for this set of data is 0.662 which is acceptable.

For factor analysis to work there has to be some kind of relationship between the variables and this is tested using the Bartlett's Test of sphericity. This test indicates whether factor analysis is appropriate for a given set of data. Factor analysis can be considered appropriate for a data only if the significance value is less than 0.05 (Field, 2000). As the significance value for the present data as shown in Table 1 is 0.000, factor analysis is appropriate for this data.

As the present data set satisfies both KMO test and Bartlett's test, factor analysis is appropriate.

Table 2 *Patients: Responsiveness of Staff Members: Communalities*

Variables	Initial	Extraction
Service of doctors was available without having to wait for long.	1.000	.524
Doctors responded to my queries positively.	1.000	.419
Doctors clearly explained the medical care to be taken after discharge.	1.000	.589
The service of nurses was available whenever required.	1.000	.396
Nurses helped me follow the instructions given by doctors.	1.000	.417
Attendants were always helpful in this hospital.	1.000	.377
Attendants and nurses were always willing to help while moving around in this hospital.	1.000	.305

Extraction Method: Principal Component Analysis.

Source *Survey Data*

Table 2 showed the communalities before and after extraction. Principal component analysis works on the assumption that all variance is common. So before extraction all communalities are 1. Column two, i.e., the extraction column indicates the percent of common variance associated with each variable. Hence from Table 2, we can say that 52.4 percent of variance associated with the variable 'Service of doctors was available without having to wait for long' is common, 41.9 percent of variance associated with the variable 'Doctors responded to my queries positively' is common and so on. The table clearly shows the percent of common variance associated with each variable. While the highest degree of common variance is with respect to 'Doctors clearly explained the medical care to be taken after discharge', the lowest common variance is in case of 'Attendants and nurses were always willing to help while moving around in this hospital'.

Table 3 *Patients: Responsiveness of Staff Members: Total Variance Explained*

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.911	27.304	27.304	1.911	27.304	27.304	1.560	22.282	22.282
2	1.116	15.947	43.251	1.116	15.947	43.251	1.468	20.969	43.251
3	.959	13.701	56.951						
4	.876	12.513	69.464						
5	.820	11.710	81.174						
6	.691	9.866	91.040						
7	.627	8.960	100.000						

Extraction Method: Principal Component Analysis
Source *Survey Data*

Table 3 lists out the eigenvalues with respect to each factor before extraction, after extraction and after rotation. Before extraction there were seven eigenvalues as there were seven variables included in the analysis. The eigenvalues associated with each factor shows the variance associated with each factor. It also shows eigenvalues in terms of percent of variance. For e.g. the first factor, i.e., '*Service of doctors was available without having to wait for long*' explains 27.3 percent of variance. It is clear from Table 3 that the first few factors explains relatively larger amount of variations in comparison to the later ones. SPSS then takes out those factors with eigenvalues greater than 1, which leaves us with 2 factors which are shown in the second part of Table 3 labeled as 'Extraction Sums of Squared Loadings.' The values in this part of the table are same as the values before extraction except that the values for factors other than those with eigenvalues greater than 1 are ignored. The last part of the table, i.e., 'Rotation Sums of Squared Loadings', displays the eigenvalues of factors after rotation. Rotation more or less optimises the factor structure leading to equalization of importance of all factors. Before rotation the first factor accounted for 27.3 percent of variance while the remaining factors contributed to lesser proportion of variance whereas after rotation all the factors contributed more or less equally thereby optimizing the importance of all factors.

Table 4 *Patients: Responsiveness of Staff members: Rotated Component Matrix*

Variables	Component	
	1	2
Service of doctors was available without having to wait for long.	.721	
The service of nurses was available whenever required.	.629	
Nurses helped me follow the instructions given by doctors.	.624	
Doctors clearly explained the medical care to be taken after discharge.		.756
Attendants were always helpful in this hospital.		.598
Attendants and nurses were always willing to help while moving around in this hospital.		.538
Doctors responded to my queries positively.	.450	.464

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization
Rotations converged in 3 iterations
Source *Survey Data*

Table 4 showed the rotated component matrix which is the matrix of factor loadings for each factor into each variable. 0.4 was used as the cut-off for factor loading. The factors converged at 3 iterations. The variables were listed in the descending order of size of their factor. As evident from Table 4, factor rotation resulted in the extraction of 2 factors as significant determinants of patients' perception regarding responsiveness of staff members at government hospital. Factor 1 loaded across three variables, i.e., '*Service of doctors were available without having to wait for long*', '*The service of nurses was*

available whenever required' and '*Nurses helped me follow the instructions given by doctors*' which will jointly be termed as ***'Availability of doctors' and nurses' services whenever required'***. Second factor loaded across four variables namely '*Doctors clearly explained the medical care to be taken after discharge*', '*Attendants were always helpful in this hospital*', '*Attendants and nurses were always willing to help while moving around in this hospital*' and '*Doctors responded to my queries positively*' which will hereafter be referred to as ***'Willingness of doctors, nurses and attendants to help patients and to clear their doubts'***.

Hence the seven variables included in the analysis converged to two factors namely ***'Availability of doctors' and nurses' services whenever required'*** and ***'Willingness of doctors, nurses and attendants to help patients and to clear their doubts'***.

The factor scores were subjected to regression analysis at 5 percent significance level by taking gender of the respondents as dependent factor to test the following hypotheses.

H1: There is no significant difference in the perception of male and female patients regarding the availability of service of doctors and nurses at the hospital whenever required.

H2: There is no significant difference in the perception of male and female patients regarding the willingness of doctors, nurses and attendants to help patients and to clear their doubts.

Table 5 *Patients: Responsiveness of Staff Members: Regression Coefficients*

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.476	.028		53.630	.000
	Availability of doctors' and nurses' services whenever required.	-.042	.028	-.085	-1.540	.125
	Willingness of doctors, nurses and attendants to help patients and to clear their doubts.	-.003	.028	-.007	-.126	.900

From regression results Table 5 it was concluded that both the factors that emerged after factor analysis were found to be insignificant as far as gender of respondents was considered. Hence, it was concluded that there was no significant difference in the opinion of male and female respondents regarding availability of doctors' and nurses' services whenever required and the willingness of doctors, nurses and attendants to help patients and to clear their doubts.

6. Conclusions and Limitations of the Study

The above results clearly indicates that among the numerous factors impacting the satisfaction level of patients with the responsiveness of staff members at government hospitals, the most prominent ones among them are availability of doctors' and nurses' services whenever required and willingness of doctors, nurses and attendants to help patients and to clear their doubts. As such, the authorities concerned should ensure that service of doctors and nurses whenever necessary and also that the doctors, nurses and support staff are always ready to clarify the doubts of patients in order to maximize their satisfaction with responsiveness of staff members. However, as the findings of the study are purely based on the inputs received from the surveyed patients, proper care should be taken before generalizing the same.

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