

Satisfaction on hospital administrative services in private hospitals of Odisha : An analytical study

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ABSTRACT

Private healthcare system, comprises limited secondary and tertiary care institutions in key cities and focuses on providing basic healthcare facilities in the form of primary healthcare centres in city areas. The private sector provides majority of secondary, tertiary, and quaternary care institutions with major concentration in metros and tier I and tier II cities. In this research, the administrative services has been included to measure the impact on the patient in creating total satisfaction on the hospitals that are engaged in different services.

KEYWORDS: services, administrative, private hospitals, satisfaction on service

Introduction

Healthcare has become one of India's largest sector, both in terms of revenue and employment. Healthcare comprises hospitals, medical devices, clinical trials, outsourcing, telemedicine, medical tourism, health insurance and medical equipment. The Indian healthcare sector is growing at a brisk pace due to its strengthening coverage, services and increasing expenditure by public as well private players. Indian healthcare delivery system is categorised into two major components public and private. The Government, i.e. public healthcare system, comprises limited secondary and tertiary care institutions in key cities and focuses on providing basic healthcare facilities in the form of primary healthcare centres (PHCs) in rural areas. The private sector provides majority of secondary, tertiary, and quaternary care institutions with major concentration in metros and tier I and tier II cities.

India's competitive advantage lies in its large pool of well-trained medical professionals. India is also cost competitive compared to its peers in Asia and Western countries. The cost of surgery in India is about one-tenth of that in the US or Western Europe.

The healthcare market can increase three-fold to Rs. 8.6 trillion (US\$ 133.44 billion) by 2022. In Budget 2021, India's public expenditure on healthcare stood at 1.2% as a percentage of the GDP.

Between April 2000 and December 2020, FDI inflows for drugs and pharmaceuticals sector stood at US\$ 17.99 billion, By June 2021, the Health Ministry's eSanjeevani telemedicine service crossed 6 million (60 lakh) teleconsultations since its launch, enabling patient-to-doctor consultations, from the confines of their home, and doctor-to-doctor consultations. In April 2021, Tata Digital infused Rs. 100 crore (US\$ 13.45 million) debt in 1mg, the online medicine start-up, and was in the final stages of acquiring a controlling stake in the company. In April 2021, the Ministry of Ayush and Council of Scientific & Industrial Research completed multi-centre clinical trial of a AYUSH 64 (a medicine) and found it useful for treatment of mild-to-moderate COVID-19 infections.

As of May 2021, 11.9 lakh Health IDs have been generated and 3,106 doctors and 1,490 facilities have registered on the National Digital Health Mission (NDHM) platform. In May 2021, Defense Minister Mr. Rajnath Singh launched 'Services e-Health Assistance & Tele-consultation (SeHAT)' OPD portal to provide telemedicine services to armed forces personnel and veterans. The Government of India approved continuation

of 'National Health Mission' with a budget of Rs. 37,130 crore (US\$ 5.10 billion) under the Union Budget 2021-22. In the Union Budget 2021, the Ministry of AYUSH was allocated Rs. 2,970 crore (US\$ 407.84 million), up from Rs. 2,122 crore (US\$ 291.39 million).

The health care facility can be divided into 2 quality dimensions: technical quality and functional quality. Technical quality in health care is mainly related to technical correctness and medical analyses and techniques, whereas functional quality refers to how the health care service is provided to patients.

Furthermore, technical quality is about what the customers get, whereas functional quality is about how they get it, that may be technical quality has high significance among patients, most patients do not have the information to assess efficiently the quality of the investigative and relaxing involvement procedure or material needed. Maximum patients cannot discriminate among the caring presentation and the curing presentation of hospitals .

Through a system approach, quality standards are formulated according to needs, but most of them focus on the technical delivery of services and ignore the customer's point of view. This technical perspective focuses on the accuracy of diagnosis, success of procedures, and satisfaction of professional requirements at the facility. As customers, patients describe the quality of services delivered in a limited way because they have insufficient knowledge about technical aspects of the service. Nonetheless, based on customers' perceptions, expectations, and observations, both technical and nontechnical aspects of services can be evaluated. Patients' feelings are crucial to improving services. Patients' arguments are important, in line with the "marketing concept," which focuses on ensuring customer satisfaction and considering that patients

The entire hospital administrative services have been analysed here out of all these service only 8 services have been identified as significant and administered to the patients .

F1: name of the medicine is always maintained in the medical history

F2: Questions about medicines have been explained properly

F3: Questions about medicines allergies /side effects have been explained

F4: Hospitals delays in admission of the patients

F5: Hassel free paper work is the standard form

F6: Consumer understands the billing procedure very clearly

F7: Availability of equipments easily and adequately

F8: Guiding and directing the patients is properly done

Scope and objective:

Here, in this research, the entire satisfaction has been analyzed to find out the significant factor responsible for satisfaction and other s as dissatisfaction. The entire services has been categorized in 8 major heads and applied in private hospitals in Odisha .

LITERATURE REVIEW:

In Disease Costing, the five diseases examined in Attanayake (2005) were considered. Bias due to the non homogeneity of patients, use of multiple sources of treatment, complexity arising from patients co-morbidity, difficulty of finding patient samples in the private sector hospitals for diseases such as asthma and Resource Book I: Costing for Hospital Management Note: A : Asthma H : Hypertension VF : Viral Fever HD : Heart Disease D : Diarrhoea NCMH WGF : National Commission on Macroeconomics and Health Working Group on Financing diabetes and difficulties in accurately determining indirect costs, particularly in the subsistence sector were some of the problems encountered.

Quality Assessment Critical assessment approaches were used to assess the quality of the selected researches (Wehbe et al., 2014, p. 145). The methods and procedures of these studies were reviewed to assess the excellence of the papers in relation to the reliability and validity of the information presented. Additionally, investigators applied a criteria scale for use in difficult cases. This quality benchmark focused on supplementary factors such as date of publications, reputation of the publishing organization, relevance of the study to the topic, methods strength, citation index and affiliations of authors.

Adashi et al. (2010) conducted a comprehensive research-based study focused on primary and health reforms (p. 2017). The study elaborated that the health care system administration played a positive role in the maintenance and application of reforms in health care settings. Health care administration requires using different strategies and approaches to implement positive changes when deriving positive outcomes.

Authors Glynn et al. (2011) focused on another important responsibility of the health care system administration. The core focus of this study is multi-morbidity within primary care and its impact over the costs. It is a fact that maintenance of financial aspects is a very important responsibility of health care system administration (Cutler et al., 2012, pp. 1875-1878). The work judges that health care system administrations

Another paper was by Bickman et al. (2011, pp.1423-1429), which also demonstrated the importance and significance of health care administration. A very common approach is used in different clinical settings for making accurate and sudden changes in the process of health care (Basinga et al., 2011, p. 1421).

Different institutions and higher-level officials note that most administrations use a feedback approach for making effective changes in their processes (Jackson et al., 2013, p. 431). This study also focuses on the importance and effects of routine feedback from clinicians over outcomes. After conducting comprehensive study, investigators concluded that the attainment of feedback will be significant to know about the negative aspects of a particular discipline. Therefore, it can be said that the use of feedback by administrations has been a positive step for providing quality health care services (Bickman et al., 2011 p. 1423).

Research methodology :

In this research a total of 195 patients were administered a questionnaire , which was based on sample from the in-house patients of different hospitals s, five hospitals were selected to collect these data . but 4 patients could not responded the questions well .So 191 were valid respondents and the scale was based on Likert scale from 1-f .

The questioner comprised of 8 significant related questions and tolls were cross matrix rest , factor analysis and correlation analysis for measuring the satisfaction percent to the all other factors . The analysis has been made as per the data collection from primary survey.

The scale in the questionnaire was used as: Likert Scale:

- Strongly Agree [5]
- Agree [4]
- Somehow Influencing [3]
- Disagree [2] and
- Strongly disagree [1]

So, here 4 and 5 are influencing and highly influencing and the average score is 3.0.

ANALYSIS AND INTERPRETATION OF RESULTS :

1. Cross matrix test of gender and age

Here age has been categorized as : Less than 25 years, Less than 26-35 years, Less than 36-.45 years, Less than 46-55 Years and More than 56 years and has been cross related to gender

Table-1: Cross matrix test of gender and age

			AGE					Total
			Less than 25 years	Less than 26-35 years	Less than 36-.45 years	Less than 46-55 Years	More than 56 years	
Gender	Male	No.s	23	24	18	32	25	122
		% within Gender	18.9%	19.7%	14.8%	26.2%	20.5%	100.0%
Female	No.s	15	16	16	12	10	69	
		% within Gender	21.7%	23.2%	23.2%	17.4%	14.5%	100.0%
Total	No.s	38	40	34	44	35	191	
		% within Gender	19.9%	20.9%	17.8%	23.0%	18.3%	100.0%

Table-1 reported the results of Age wise categorization, which has been reported with the gender types . Out of 130 patients 85 are found male(65%) where as only 45 respondents were female(35%). In the age group of 46-55 and 36-45 , maximum patients are found . So , it is concluded that the entire results depends upon the responses from male category those are in the age group of 46-55 years , i.e. middle aged groups .

Even the disparity among the age groups revealed a less , still the results depends upon the middle aged category patients . Lowest number of patient of female category is found in the above 56 years age group

Table-2: Chi-Square Tests of gender and age

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	4.566 ^a	4	.335
Likelihood Ratio	4.598	4	.331
Linear-by-Linear Association	2.021	1	.155
N of Valid Cases	191		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 12.28.

The chi-square results of Age and Gender has been depicted in the table-2 , which shows 6.684 with significance value of 0.154, which means the gap across gender is very close in response to the age groups .Here 130 responses were decoded and the result indicated group wise difference which can be analysed further as the results are not of similar type.

2. Gender and occupation

Table---3: Cross matrix of gender and occupation

			Occupation					Total
			Business	Service	Professionals	student	Retired	
Gender	Male	Count	49	48	11	12	2	122
		% within Gender	40.2%	39.3%	9.0%	9.8%	1.6%	100.0%
	Female	Count	26	33	2	6	2	69
		% within Gender	37.7%	47.8%	2.9%	8.7%	2.9%	100.0%
Total		Count	75	81	13	18	4	191
		% within Gender	39.3%	42.4%	6.8%	9.4%	2.1%	100.0%

Table-3 reported the results of occupation wise categorization, which has been reported with the gender types . Out of 191 patients 81 , i.e(42.4%) are service holders , where as only 75 respondents were business category (39.3%). In the occupational group of Business category and service category , maximum patients are found and included in the study . So , it is concluded that the entire results depends upon the responses from service category those 49 are male . Even the disparity among the occupational groups revealed a less , still the results depends upon the service and business category patients . Lowest number of patient from student category , i.e. 2.1%.

Table-4: Chi-Square Tests of gender and occupation

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	3.635 ^a	4	0.058
Likelihood Ratio	3.959	4	.012
Linear-by-Linear Association	.020	1	.889
N of Valid Cases	191		

a. 3 cells (30.0%) have expected count less than 5. The minimum expected count is 1.45.

The chi-square results of occupation and Gender has been depicted in the table-4 , which shows 3.635 with significance value of 0.058, which means the gap across gender is very close in response to the occupational groups .Here 191 responses were decoded and the result indicated group wise difference which can be analysed further as the results are not of similar type.

FACOTR ANALYSIS

Table-5: Reliability test

Cronbach's Alpha	N of Items
0.906	8

Table- 5 reported the reliability test (Cronbach's Alpha) of “ **perception on hospital services** ”, which is performed to check the reliability of questions (8) of all items that constitute dimensions. It resulted in an overall score of 0.906 indicating internal consistency of the items and the reliability of responses, which can be positively considered as accepted for further analysis for **perception on hospital services/**

Table- 6: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.873
Bartlett's Test of Sphericity	Approx. Chi-Square	28.176
	df	28
	Sig.	.035

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy test results depicted in the table-6 reported test result of “**perception on hospital services**”as 0.873, which is acceptable for any factorial analysis and the result also corroborate the factorial linkage among variables on ‘**services**’, which is also positive in all respect referring : **perception on hospital services**

ADMINISTRATIVE SERVICES :

F1: name of the medicine is always maintained in the medical history

F2: Questions about medicines have been explained properly

F3: Questions about medicines allergies /side effects have been explained

F4: Hospitals delays in admission of the patients

F5: Hassel free paper work is the standard form

F6: Consumer understands the billing procedure very clearly

F7: Availability of equipments easily and adequately

F8: Guiding and directing the patients is properly done

Table-7: Communalities

		Extraction
F1	Name of the medicine is always maintained in the medical history	.997
F2	Questions about medicines have been explained properly	.993
F3	Questions about medicines allergies /side effects have been explained	.866
F4	Hospitals delays in admission of the patients	.663
F5	Hassel free paper work is the standard form	.562
F6	Consumer understands the billing procedure very clearly	.897
F7	Availability of equipments easily and adequately	.993
F8	Guiding and directing the patients is properly done	.921

Extraction Method: Principal Component Analysis.

Table -7 indicates the communalities of factor analysis by using Principal Component analysis of 'perception on hospital services'.. Communalities indicate the proportion of extraction values out of 8 in response to each individual factor, which have been explained in the above table. Here the initial value of each factor is 1.00, but the highest extraction value is 0.997. All factors have the more extraction values (≥ 0.500) on **perception on hospital services**. Above all , all the factors are fit to be used in factoral analysis as the value shows above 50 percent level. The factor analysis has been used by applying Principal Component analysis for identifying the principal factors responsible for the cause

Table-8: Total Variance

Component	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.143	26.785	26.785	2.016	25.199	25.199
2	1.890	23.631	50.415	2.006	25.075	50.274
3	1.183	14.792	65.208	1.157	14.466	64.740
4	1.077	13.466	78.674	1.115	13.933	78.674

Extraction Method: Principal Component Analysis.

Table--8 explains the total variance of individual factors as well the sum of squares loading values on ‘**perception on hospital services**’. . 8 factors have been derived in the initial Eigen values, which are positive and finite values. But in extraction values only 4 factors have been extracted, as these are most important among the 8 selected factors in the initial Eigen values. Here, the initial values are 2.143, for this factors. Out of that 5 factors , one is having the values of above one. So, from that it is concluded that only 5 factors mostly influenced the perception of patients and they are satisfied with these factors . Further, in the percentage of variances, it is found that the values shown as 78.674. So among all the factors only 4 factors are the most important for the patients . .

Table-9: Component Matrix^a on perception on hospital services

		Component			
		1	2	3	4
F1	Name of the medicine is always maintained in the medical history	.734	.998	-.023	-.001
F2	Questions about medicines have been explained properly	.996	.035	-.017	-.017
F3	Questions about medicines allergies /side effects have been explained	.096	-.093	.736	-.079
F4	Hospitals delays in admission of the patients	.035	.022	.205	.787
F5	Hassel free paper work is the standard form	-.066	-.024	-.266	.698
F6	Consumer understands the billing procedure very clearly	.034	.998	-.023	-.001
F7	Availability of equipments easily and adequately	.990	.035	.017	.017
F8	Guiding and directing the patients is properly done	.824	.150	.708	.047

Extraction Method: Principal Component Analysis.

Table -9 indicates that the analysis of components matrix, where Component ‘1’ highlights the highest positive values on the factors on ‘**perception on hospital services**’ as A1: Doctors listen patients carefully and F1: Name of the medicine is always maintained in the medical history(0.734) and F2: Questions about medicines have been explained properly(0.996) respectively . Here patients have expressed their views on these factors as most positive also on F7: Availability of equipments easily and adequately(0.990) and F8: Guiding and directing the patients is properly done (0.824) . In considering the component column, it has been observed that, the – ‘**perception on hospital services**’ are having most positive. Further, in other column of the component matrix reported the results positive on the same factors as column –I , ‘with positive values . So, in compound assessment, the other factors following to this above factors are not that significantly related and satisfies the patients at par to their expectation.

Service satisfaction

Table-10: Correlations of administrative service factors

		Satisfaction	F1	F2	F3	F4	F5	F6	F7	F8
Satisfaction	R-value	1								
	Sig. (2-tailed)									
	No. of customers	191								
F1	R-value	.872*	1							
	Sig. (2-tailed)	.022								
	No. of customers	191	191							
F2	R-value	.712	.067	1						
	Sig. (2-tailed)	.075	.360							
	No. of customers	191	191	191						
F3	R-value	-.013	-.073	.042	1					
	Sig. (2-tailed)	.859	.313	.563						
	No. of customers	191	191	191	191					
F4	R-value	.091	.011	-.006	.017	1				
	Sig. (2-tailed)	.210	.883	.932	.810					
	No. of customers	191	191	191	191	191				
F5	R-value	-.013	-.008	-.054	-.100	.113	1			
	Sig. (2-tailed)	.859	.915	.462	.167	.120				
	No. of customers	191	191	191	191	191	191			
F6	R-value	.072	0.996**	.067	-.073	.011	-.008	1		
	Sig. (2-tailed)	.322	.000	.360	.313	.883	.915			
	No. of customers	191	191	191	191	191	191	191		

F7	R-value	.812*	.067	0.998**	.042	-.006	-.054	.067	1
	Sig. (2-tailed)	.075	.360	.000	.563	.932	.462	.360	
	No. of customers	191	191	191	191	191	191	191	191
F8	R-value	.717**	.801*	.179	.129	.013	-.033	.001	.779
	Sig. (2-tailed)	.003	.001	.274	.076	.858	.651	.991	.074
	No. of customers	191	191	191	191	191	191	191	191

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Here in table-10, the correlation results with the 8 no.s of factors has been correlated with satisfaction . the result shows significantly positive on F1: .872* and F2: 0.721 . further , r-values strongly positive with F7: (0.812*) and with F8(0.717**) . That means these four factors are significantly positively correlated with satisfaction level changes . But other factors are insignificant except F3: (0.998**) with F7 and F1 . that means F3 are similarly related to satisfaction . these are as : Name of the medicine is always maintained in the medical history, Questions about medicines have been explained properly , Questions about medicines allergies /side effects have been explained , Availability of equipments easily and adequately and Guiding and directing the patients is properly done .

Conclusion :

The researchers, this study contributes by testing the applicability of SERVQUAL in developing state like Odisha . This model was developed in the context and needed to be evaluated in a developing area; therefore, more studies with the items suggested in this study and/or items from a more in-depth literature review should also be conducted in hospitals with a larger sample size to see whether the scale developed in this study is useful in similar situations to make generalizations. The significant satisfaction items are as : Name of the medicine is always maintained in the medical history, Questions about medicines have been explained properly , Questions about medicines allergies /side effects have been explained , Availability of equipments easily and adequately and Guiding and directing the patients is properly done . It has been observed that, the – ‘**perception on hospital services**’ are having most positive values So it suggested that the hospitals must be more alert towards the other seven items that gives a poor impression as Hospitals delays in admission of the patients , it is not Hassel free paper work is the standard form and on Consumer don't understands the billing procedure very clearly . So, It may not be easy to cost a product accurately in health care services as most of the disease processes are highly individualized. A careful study of several similar cases however would give broad guidelines for cost estimates. Therefore, the close involvement of medical administrators as well as accountants in costing processes is essential.

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