

**An empirical study on correlation of the factors of the perception :
Service delivery & patient satisfaction about service quality in selected
public & private hospitals of the Raipur city**

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Abstract

In an organization resembling a hospital, the quality of service is of utmost importance in relation to both the quality of services offered and the satisfaction of patients. Several metrics assess the quality of service provided in hospitals. Assessing the quality of service is crucial for obtaining feedback on the services rendered, the supplied therapy, its effectiveness and execution, and ultimately the level of satisfaction. This research study incorporates three primary criteria to assess the quality of hospital services (HSQ): perception, service delivery, and patient satisfaction. This article will examine the relationship between the chosen variables for research objectives. The factor analyses, namely exploratory factor analysis (EFA) and confirmatory factor analysis (CFA), have been conducted to identify and extract the final components for the aim of examining correlations. This study work is founded on the main data obtained from individuals who were admitted to the hospital (IPD patients), those who visited for follow-up appointments (OPD patients), and their accompanying individuals.

Subject Classification: 00A99.

Keywords: Perception, Service delivery, Customer satisfaction service quality, Public and private hospitals.

Introduction

We all know that health is a basic need of the individual. Developing a healthy nation is the ultimate responsibility of both the public and private sectors. Services in the hospitals should be good as far as treatment and patient care is concerned. Treatment and palliative care is the basic responsibility of any healthcare organization. Many hospitals have a wide

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range of services but they lack implementation which results in patient dissatisfaction and lowers productivity and growth. On the contrary, some hospitals have fewer services but their impact and implementation are good which results in good patient satisfaction and increases productivity and growth.

Literature review

Aagja & Garg, 2010; D'Souza & Sequeira, 2012, Miranda et al. 2010, suggested that, if we use a mutual approach towards the measurement of service quality there will be a requirement of dealing with the perception because these services are for the value addition for customers and service providers and even if hospitals have their perception and opinion regarding that, hospitals must ensure the fact that importance is given to the customers and service providers using their core strength to fulfill the requirements of customers.

Karaca and Durna (2019), carried out a study that was cross-sectional and descriptive by taking the opinions of 635 patients, who were discharged from IPD of a private hospital, by nurses and was measured with help of a self-administered questionnaire, which contained 19 items. Results revealed that patients rated care and concern from nurses at the highest level and the lowest level was the information provided to patients on their line of treatment. According to demographic factors, the perception of patients was different for different departments; hence there was the effect of demographics on nursing services quality. Suggestions given to hospitals were to ensure that nurses provide all the relevant information to patients which nurses think might be of concern to the patients.

Abbasi et al. (2019), the process of evaluation by patients in teaching hospitals associated with Tehran. 400 random patients, the results revealed that were impressed by the admission process, cost of treatment, and consultation given by doctors. Waiting time was a factor leading to dissatisfaction among patients. Overall SQ was found to be good, it was found to be moderated by almost 96 percent of the sample size, a few improvements in reducing the waiting time may lead to more customer satisfaction from service quality.

Research Methodology

Purpose

The purpose of this paper is to study the correlation between the factors of perception, service delivery & customer satisfaction.

Objectives of the Study

1. To study the correlation of the factors of perception regarding the service quality in selected public and private hospitals in Raipur city.
2. To study the correlation of the factors of service delivery regarding the service quality in selected public and private hospitals in Raipur city.
3. To study the correlation of the factors of customer satisfaction regarding the service quality in selected public and private hospitals in Raipur city.

Population

The population of the study constitutes the IPD patients, attendants, and OPD (Follow-up patients).

Sample Area & Sample Size and Hospitals taken for study purposes

The study has been conducted at Raipur city of Chhattisgarh. The 500 & is shown in Table1.

Table 1

Hospital sector	Name of the Hospital / Organization	Total sample size
Public	Pt. J.N.M. Medical College is associated with Dr. Bhim Rao Ambedkar Memorial Hospital & Regional Cancer Centre, Raipur. Chhattisgarh, India	125
	All India Institute of Medical Sciences, AIIMS, Raipur. Chhattisgarh, India	125
	TOTAL (A)	250
Private	Ramakrishna Care Hospital, Raipur. Chhattisgarh, India	125
	Narayana Hridulaya, NH-MMI hospital, Raipur. Chhattisgarh, India	125
	TOTAL (B)	250
	GRAND TOTAL (A+B)	500

Result & Discussion

In the section, we have done the correlation of the factors of our three variables taken in our study viz, Perception, Service Delivery & Customer Satisfaction.

Correlation Analysis

A correlation is a connection between two variables used to describe or forecast information. This relationship produces a correlation coefficient that shows how a change in variables is connected. This coefficient tests whether and how strongly the two variables correlate.

To find correlation between variables, utilize the correlation coefficient equation manually or in SPSS. When solved, the correlation coefficient equation yields -1 to 1. Closer to a positive 1 or negative 1 indicates a stronger positive or negative association. The link weakens as the number approaches zero. Zero means no association between variables. Thus, a correlation coefficient is an equation that measures two variables' link strength. Correlation coefficient (r) and significance (p -value) are used to indicate the association between factors/variables. A p -value of <0.05 indicates a 95% significant relationship, while a p -value of <0.01 indicates a 99% significant relationship. Self-understanding indicates that 99% significance is larger than 95%, making $p < 0.01$ more significant than $p < 0.05$.

Table 2 shows the correlation results between perception, service delivery, and customer satisfaction. The table is followed by its description where each factor has been reported passage by passage separately. The researcher has tried to explain the results received by correlation of the set of variables selected for this study in the following lines through short descriptions.

There are 17 factors studied under three variables, but since the factor 'need for growth' had two scales to measure its presence in the respondents, a separate row and column have been made. Therefore, the table has 17 rows and 17 columns reporting the said variables and their respective factors.

Initiating with the perception variable under which four factors have been correlated. The first factor, empathy shows a significant and strong positive correlation with all the other factors of perceptions, reliability ($r_1 = 0.628$; $p_1 < 0.01$), tangibility ($r_2 = 0.404$; $p_2 < 0.01$), responsiveness ($r_3 = 0.498$; $p_3 < 0.01$) which characterizes its belongingness to a common group of perception. The empathy factor shows a significant positive correlation with all the factors of service delivery correlating with security services ($r_4 = 0.327$; $p_4 < 0.01$), and lab and diagnostic services ($r_5 = 0.278$; $p_5 < 0.01$). The correlation with the admission process was also positive and significant ($r_6 = 0.529$; $p_6 < 0.01$). In the case of correlation between empathy and nursing services, the results were again significant and positive with,

Table 2
Correlation between the Factors of Perception, service delivery & customer satisfaction

	ESD	RSD	TAN	RP	SS	LDS	AP	NS	HS	FS	PCS	AV	AC	INT	TQ	HP	COM
ESD																	
Pearson correlation	1	.626**	.404**	.498**	.327**	.406**	.529**	.477**	.321**	.246**	.307**	-.200**	-.231**	-.153**	-.247**	-.219**	-.196**
Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.001	.000	.000	.000
N	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
RSD	.626**																
Pearson correlation		1	.409**	.493**	.372**	.366**	.446**	.491**	.383	.299**	.308**	-.227**	-.220**	-.134**	-.273**	-.271**	-.221**
Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.003	.000	.000	.000
N	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
TAN	.404**	.409**															
Pearson correlation			1	.561**	.324**	.445**	.536**	.371**	.238**	.136**	.310**	-.157**	-.212**	-.125**	-.297**	-.286**	-.203**
Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000	.000	.002	.000	.000	.000	.005	.000	.000	.000
N	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
RP	.498**	.493**	.561**														
Pearson correlation				1	.319**	.467**	.656**	.519**	.305**	.142**	.309**	-.235**	-.250**	-.199**	-.311**	-.306**	-.246**
Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000	.000	.001	.000	.000	.000	.000	.000	.000	.000
N	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
SS	.327**	.372**	.324**	.319**													
Pearson correlation					1	.358**	.362**	.373**	.468**	.417**	.361**	-.177**	-.126**	-.106**	-.199**	-.152**	-.131**
Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.005	.018	.000	.001	.003
N	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
LDS	.406**	.366**	.445**	.467**	.358**												
Pearson correlation						1	.570**	.393**	.262**	.310**	.284**	-.012	.035	.049	-.104*	-.103*	-.042
Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.788	.438	.270	.020	.021	.352
N	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
AP	.529**	.446**	.536**	.655**	.362**	.570**											
Pearson correlation							1	.511**	.264**	.183**	.332**	-.252**	-.214**	-.179**	-.309**	-.315**	-.221**
Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
N	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
NS	.477**	.491**	.371**	.519**	.373**	.393**	.511**										
Pearson correlation								1	.324**	.268**	.321**	-.282**	-.258**	-.264**	-.328**	-.301**	-.270**
Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
N	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500

Contd...

HS	Pearson correlation	.321**	.383**	.238**	.305**	.468**	.262**	.264**	.324**	1	.464**	.401**	-.229**	-.189**	-.168**	-.263**	-.205**	-.199**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000	.000	.000	.000
	N	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
	Pearson correlation	.246**	.299**	.136**	.142**	.417**	.310**	.183**	.268**	.464**	1	.370**	-.071**	-.009**	-.029**	-.037**	-.046**	-.052**
FS	Sig. (2-tailed)	.000	.000	.002	.001	.000	.000	.000	.000	.000	.000	.000	.111	.838	.520	.405	.304	.242
	N	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
PPCS	Pearson correlation	.307**	.308**	.310**	.308**	.361**	.284**	.332**	.321**	.401**	.370**	1	-.163**	-.127**	-.111**	-.144**	-.134**	-.082**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.005	.013	.001	.003	.066
	N	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
	Pearson correlation	-.200**	-.227**	-.157**	-.235**	-.177**	-.012	-.252**	-.282**	-.229**	-.071	-.163**	1	.734**	.660**	.651**	.734**	.649**
AV	Sig. (2-tailed)	.000	.000	.000	.000	.000	.788	.000	.000	.000	.111	.000	.000	.000	.000	.000	.000	.000
	N	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
AC	Pearson correlation	-.231**	-.220**	-.212**	-.250**	-.126**	.035**	-.214**	-.258**	-.189**	-.009	-.127**	.734**	1	.691**	.704**	.719**	.690**
	Sig. (2-tailed)	.000	.000	.000	.000	.005	.436	.000	.000	.000	.838	.005	.000	.000	.000	.000	.000	.000
	N	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
	Pearson correlation	-.153**	-.134**	-.125**	-.199**	-.106**	.049	-.179**	-.264**	-.168**	-.029	-.111**	.660**	.691**	1	.598**	.605**	.726**
INT	Sig. (2-tailed)	.001	.003	.005	.000	.018	.270	.000	.000	.000	.520	.013	.000	.000	.000	.000	.000	.000
	N	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
TQ	Pearson correlation	-.247**	-.273**	-.297**	-.311**	-.199**	-.104**	-.309**	-.328**	-.263**	-.037	-.144**	.651**	.704**	.598**	1	.715**	.700**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.020	.000	.000	.000	.405	.001	.000	.000	.000	.000	.000	.000
	N	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
	Pearson correlation	-.219**	-.271**	-.286**	-.305**	-.152**	-.103**	-.315**	-.301**	-.205**	-.046	-.134**	.734**	.719**	.605**	.715**	1	.683**
HP	Sig. (2-tailed)	.000	.000	.000	.000	.001	.021	.000	.000	.000	.304	.003	.000	.000	.000	.000	.000	.000
	N	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
COM	Pearson correlation	-.196**	-.221**	-.203**	-.246**	-.131**	-.042	-.221**	-.270**	-.199**	-.052	-.092	.649**	.690**	.726**	.700**	.683**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.003	.352	.000	.000	.000	.242	.066	.000	.000	.000	.000	.000	.000
	N	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500

($r_7 = 0.477$; $p_7 < 0.01$), housekeeping services ($r_8 = 0.321$; $p_8 < 0.01$), food services ($r_9 = 0.246$; $p_9 < 0.01$), and patient care services ($r_{10} = 0.307$; $p_{10} < 0.01$). In the case of correlating empathy with customer satisfaction factors, all of them portrayed a significant negative correlation. In the case of empathy and availability, the relationship ($r = -0.200$) is negative, which reflects a strong negative correlation. Administrative care ($r_{11} = -0.231$, $p_{11} < 0.01$) and interaction ($r_{12} = -0.153$, $p_{12} < 0.01$). The correlation of empathy with technical quality ($r_{13} = -0.247$, $p_{13} < 0.01$), hospital personnel ($r_{14} = -0.219$, $p_{14} < 0.01$), and lastly the communication ($r_{15} = -0.196$, $p_{15} < 0.01$).

Second factor of perception is reliability which also shows a significant and strong positive correlation with all the other factors of perception, empathy ($r_1 = 0.625$; $p_1 < 0.01$), tangibility ($r_2 = 0.409$; $p_2 < 0.01$) responsiveness, ($r_3 = 0.493$; $p_3 < 0.01$) indicating its affiliation to the similar natured group. The factors of service delivery to showing results with security services $r_4 = 0.372$; $p_4 < 0.01$, while correlating with lab and diagnostics ($r_5 = 0.366$; $p_5 < 0.01$), admission process ($r_6 = 0.446$; $p_6 < 0.01$), nursing services ($r_7 = 0.491$; $p_7 < 0.01$), housekeeping services ($r_8 = 0.383$; $p_8 < 0.01$), food services ($r_9 = 0.299$; $p_9 < 0.01$) and patient care service ($r_{10} = 0.308$; $p_{10} < 0.01$). Similarly, in the case of the correlation between reliability and customer satisfaction, factors like availability ($r_{11} = -0.227$; $p_{11} < 0.01$), administrative care ($r_{12} = -0.220$; $p_{12} < 0.01$), interaction ($r_{13} = -0.134$; $p_{13} < 0.01$) and technical quality ($r_{14} = -0.273$; $p_{14} < 0.01$), hospital personnel ($r_{15} = -0.219$; $p_{15} < 0.01$) and communications ($r_{16} = -0.221$; $p_{16} < 0.01$),

Third factor of perception is tangibility which also shows a significant and strong positive correlation with all the other factors of perception, empathy ($r_1 = 0.404$; $p_1 < 0.01$) tangibility ($r_2 = 0.409$; $p_2 < 0.01$) responsiveness, ($r_3 = 0.561$; $p_3 < 0.01$) indicating its affiliation to the similar natured group. The factors of service delivery showing results with security services $r_4 = 0.324$; $p_4 < 0.01$, while correlating with lab and diagnostics ($r_5 = 0.445$; $p_5 < 0.01$), admission process ($r_6 = 0.563$; $p_6 < 0.01$), nursing services ($r_7 = 0.371$; $p_7 < 0.01$), housekeeping services ($r_8 = 0.238$; $p_8 < 0.01$), food services ($r_9 = 0.136$; $p_9 < 0.01$) and patient care service ($r_{10} = 0.310$; $p_{10} < 0.01$). Similarly, in the case of the correlation between tangibility and customer satisfaction, factors like availability ($r_{11} = -0.157$; $p_{11} < 0.01$), administrative care ($r_{12} = -0.212$; $p_{12} < 0.01$), interaction ($r_{13} = -0.125$; $p_{13} < 0.01$) and technical quality ($r_{14} = -0.297$; $p_{14} < 0.01$), hospital personnel ($r_{15} = -0.286$; $p_{15} < 0.01$) and communications ($r_{16} = -0.203$; $p_{16} < 0.01$),

Fourth factor of perception is responsiveness which also shows a significant and strong positive correlation with all the other factors of perception, empathy ($r_1 = 0.498$; $p_1 < 0.01$) reliability ($r_2 = 0.493$; $p_2 < 0.01$)

responsiveness, ($r_3 = 0.561$; $p_3 < 0.01$) indicating its affiliation to the similar natured group. The factors of service delivery to showing results with security services ($r_4 = 0.319$; $p_4 < 0.01$), while correlating with lab and diagnostics ($r_5 = 0.467$; $p_5 < 0.01$), admission process ($r_6 = 0.655$; $p_6 < 0.01$), nursing services ($r_7 = 0.519$; $p_7 < 0.01$), housekeeping services ($r_8 = 0.305$; $p_8 < 0.01$), food services ($r_9 = 0.142$; $p_9 < 0.01$) and patient care service ($r_{10} = 0.308$; $p_{10} < 0.01$). Similarly, in the case of the correlation between responsiveness and customer satisfaction, factors like availability ($r_{11} = -0.235$; $p_{11} < 0.01$), administrative care ($r_{12} = -0.250$; $p_{12} < 0.01$), interaction ($r_{13} = -0.199$; $p_{13} < 0.01$) and technical quality ($r_{14} = -0.311$; $p_{14} < 0.01$), hospital personnel ($r_{15} = -0.306$; $p_{15} < 0.01$) and communications ($r_{16} = -0.246$; $p_{16} < 0.01$).

First factor of service delivery is security services which also shows a significant and strong positive correlation with all the other factors of perception, empathy ($r_1 = 0.327$; $p_1 < 0.01$) reliability ($r_2 = 0.372$; $p_2 < 0.01$), tangibility ($r_3 = 0.324$; $p_3 < 0.01$), responsiveness, ($r_4 = 0.319$; $p_4 < 0.01$). The factors of service delivery show results correlating with lab and diagnostics ($r_5 = 0.358$; $p_5 < 0.01$), admission process ($r_6 = 0.362$; $p_6 < 0.01$), nursing services ($r_7 = 0.373$; $p_7 < 0.01$), housekeeping services ($r_8 = 0.468$; $p_8 < 0.01$), food services ($r_9 = 0.417$; $p_9 < 0.01$) and patient care service ($r_{10} = 0.361$; $p_{10} < 0.01$). Similarly, in the case of the correlation between security services and customer satisfaction, factors like availability ($r_{11} = -0.177$; $p_{11} < 0.01$), administrative care ($r_{12} = -0.126$; $p_{12} < 0.01$), interaction ($r_{13} = -0.106$; $p_{13} < 0.01$) and technical quality ($r_{14} = -0.199$; $p_{14} < 0.01$), hospital personnel ($r_{15} = -0.152$; $p_{15} < 0.01$) and communications ($r_{16} = -0.131$; $p_{16} < 0.01$),

Second factor of service delivery is lab and diagnostic services which also shows a significant and strong positive correlation with all the other factors of perception, empathy ($r_1 = 0.406$; $p_1 < 0.01$) reliability ($r_2 = 0.366$; $p_2 < 0.01$), tangibility ($r_3 = 0.445$; $p_3 < 0.01$), responsiveness, ($r_4 = 0.467$; $p_4 < 0.01$). The factors of service delivery also show results correlating with the admission process ($r_5 = 0.570$; $p_5 < 0.01$), nursing services ($r_6 = 0.393$; $p_6 < 0.01$), housekeeping services ($r_7 = 0.252$; $p_7 < 0.01$), food services ($r_8 = 0.310$; $p_8 < 0.01$) and patient care service ($r_9 = 0.284$; $p_9 < 0.01$). Similarly, in the case of the correlation between lab and diagnostic and customer satisfaction, factors like availability ($r_{10} = -0.012$; $p_{10} < 0.01$), administrative care ($r_{11} = 0.035$; $p_{11} < 0.01$), interaction ($r_{12} = -0.049$; $p_{12} < 0.01$) but significant correlation with technical quality ($r_{13} = -0.104$; $p_{13} < 0.01$), hospital personnel ($r_{14} = -0.103$; $p_{14} < 0.01$) and again no correlation with communications ($r_{15} = -0.042$; $p_{15} < 0.01$),

Third factor of service delivery is the admission process which also shows a significant and strong positive correlation with all the other factors of perception, empathy ($r_1 = 0.529$; $p_1 < 0.01$) reliability ($r_2 = 0.446$; $p_2 < 0.01$), tangibility ($r_3 = 0.536$ $p_3 < 0.01$), responsiveness, ($r_4 = 0.655$; $p_4 < 0.01$). The factors of service delivery also show results correlating with security services ($r_5 = 0.362$; $p_5 < 0.01$), nursing services ($r_6 = 0.511$; $p_6 < 0.01$), housekeeping services ($r_7 = 0.284$; $p_7 < 0.01$), food services ($r_8 = 0.183$; $p_8 < 0.01$) and patient care service ($r_9 = 0.332$; $p_9 < 0.01$). Similarly, in the case of the correlation between the admission process and customer satisfaction, factors like availability ($r_{10} = -0.252$; $p_{10} < 0.01$), administrative care ($r_{11} = 0.214$; $p_{11} < 0.01$), interaction ($r_{12} = -0.179$ $p_{12} < 0.01$), technical quality ($r_{13} = -0.309$; $p_{13} < 0.01$), hospital personnel ($r_{14} = -0.315$ $p_{14} < 0.01$) and again no correlation with communications ($r_{15} = -0.221$; $p_{15} < 0.01$),

Fourth factor of service delivery is the nursing services factor which also shows a significant and strong positive correlation with all the other factors of perception, empathy ($r_1 = 0.477$; $p_1 < 0.01$) reliability ($r_2 = 0.491$; $p_2 < 0.01$), tangibility ($r_3 = 0.371$ $p_3 < 0.01$), responsiveness, ($r_4 = 0.519$; $p_4 < 0.01$). The factors of service delivery show results correlating with security services ($r_5 = 0.373$; $p_5 < 0.01$), lab and diagnostic services ($r_6 = 0.393$; $p_6 < 0.01$), admission process ($r_7 = 0.511$; $p_7 < 0.01$), housekeeping services ($r_8 = 0.324$; $p_8 < 0.01$), food services ($r_9 = 0.268$; $p_9 < 0.01$) and patient care service ($r_{10} = 0.331$; $p_{10} < 0.01$). Similarly, in the case of the correlation between nursing services and customer satisfaction, factors like availability ($r_{11} = -0.282$; $p_{11} < 0.01$), administrative care ($r_{12} = 0.258$; $p_{12} < 0.01$), interaction ($r_{13} = -0.264$ $p_{13} < 0.01$), technical quality ($r_{14} = -0.328$; $p_{14} < 0.01$), hospital personnel ($r_{15} = -0.301$ $p_{15} < 0.01$) and again no correlation with communications ($r_{16} = -0.270$; $p_{16} < 0.01$),

Fifth factor of service delivery is housekeeping services which shows a significant and strong positive correlation with all other factors of perception, empathy ($r_1 = 0.321$; $p_1 < 0.01$) reliability ($r_2 = 0.383$; $p_2 < 0.01$), tangibility ($r_3 = 0.238$ $p_3 < 0.01$), responsiveness, ($r_4 = 0.305$ $p_4 < 0.01$). The factors of service delivery show results correlating with security services ($r_5 = 0.468$; $p_5 < 0.01$), lab and diagnostic services ($r_6 = 0.262$; $p_6 < 0.01$), admission process ($r_7 = 0.264$; $p_7 < 0.01$), nursing services ($r_8 = 0.324$; $p_8 < 0.01$), food services ($r_9 = 0.464$; $p_9 < 0.01$) and patient care service ($r_{10} = 0.401$; $p_{10} < 0.01$). Similarly, in the case of the correlation between housekeeping services and customer satisfaction, factors like availability ($r_{11} = -0.229$; $p_{11} < 0.01$), administrative care ($r_{12} = 0.189$; $p_{12} < 0.01$), interaction ($r_{13} = -0.168$ $p_{13} < 0.01$), technical quality ($r_{14} = -0.263$; $p_{14} < 0.01$),

hospital personnel ($r_{15} = -0.205$ $p_{15} < 0.01$) and again no correlation with communications ($r_{16} = -0.199$; $p_{16} < 0.01$),

Sixth factor of service delivery is food services which shows a significant and strong positive correlation with all other factors of perception, empathy ($r_1 = 0.246$; $p_1 < 0.01$) reliability ($r_2 = 0.299$; $p_2 < 0.01$), tangibility ($r_3 = 0.136$ $p_3 < 0.01$), responsiveness, ($r_4 = 0.142$ $p_4 < 0.01$). The factors of service delivery showing results correlating with security services ($r_5 = 0.417$ $p_5 < 0.01$), lab and diagnostic services ($r_6 = 0.310$; $p_6 < 0.01$), admission process ($r_7 = 0.183$; $p_7 < 0.01$), nursing services ($r_8 = 0.324$; $p_8 < 0.01$), housekeeping services ($r_9 = 0.464$; $p_9 < 0.01$) and patient care service ($r_{10} = 0.370$; $p_{10} < 0.01$). Similarly, in the case of the correlation between housekeeping services and customer satisfaction, factors like availability ($r_{11} = -0.071$; $p_{11} < 0.01$), administrative care ($r_{12} = 0.009$; $p_{12} < 0.01$), interaction ($r_{13} = -0.029$ $p_{13} < 0.01$), technical quality ($r_{14} = -0.037$; $p_{14} < 0.01$), hospital personnel ($r_{15} = -0.046$ $p_{15} < 0.01$) and again no correlation with communications ($r_{16} = -0.052$; $p_{16} < 0.01$),

Seventh and last factor of service delivery is patient care services which shows a significant and strong positive correlation with all other factors of perception, empathy ($r_1 = 0.307$ $p_1 < 0.01$) reliability ($r_2 = 0.308$; $p_2 < 0.01$), tangibility ($r_3 = 0.310$; $p_3 < 0.01$), responsiveness, ($r_4 = 0.308$ $p_4 < 0.01$). The factors of service delivery showing results correlating with security services ($r_5 = 0.361$ $p_5 < 0.01$), lab and diagnostic services ($r_6 = 0.284$; $p_6 < 0.01$), admission process ($r_7 = 0.332$; $p_7 < 0.01$), nursing services ($r_8 = 0.321$; $p_8 < 0.01$), housekeeping services ($r_9 = 0.401$; $p_9 < 0.01$) and food service ($r_{10} = 0.370$; $p_{10} < 0.01$). Similarly, in the case of correlation between patient care and customer satisfaction, the factors like availability ($r_{11} = -0.0163$; $p_{11} < 0.01$), administrative care ($r_{12} = 0.127$; $p_{12} < 0.01$), interaction ($r_{13} = -0.0111$ $p_{13} < 0.01$), technical quality ($r_{14} = -0.144$; $p_{14} < 0.01$), hospital personnel ($r_{15} = -0.134$ $p_{15} < 0.01$) and again no correlation with communications ($r_{16} = -0.082$; $p_{16} < 0.01$).

First factor of customer satisfaction is availability which shows a significant and strong negative correlation with all other factors of perception, empathy ($r_1 = -0.200$ $p_1 < 0.01$) reliability ($r_2 = -0.227$; $p_2 < 0.01$), tangibility ($r_3 = -0.157$; $p_3 < 0.01$), responsiveness, ($r_4 = -0.235$ $p_4 < 0.01$). The factors of service delivery showing results correlating with security services ($r_5 = -0.177$ $p_5 < 0.01$), lab and diagnostic services ($r_6 = -0.012$; $p_6 < 0.01$), admission process ($r_7 = -0.252$; $p_7 < 0.01$), nursing services ($r_8 = -0.282$; $p_8 < 0.01$), housekeeping services ($r_9 = -0.229$; $p_9 < 0.01$) and food service ($r_{10} = -0.071$; $p_{10} < 0.01$), patient care services ($r_{11} = -0.163$; $p_{11} < 0.01$), Similarly, in the case of correlation between availability and customer

satisfaction, factors like administrative care ($r_{12} = 0.734$; $p_{12} < 0.01$), interaction ($r_{13} = 0.660$ $p_{13} < 0.01$), technical quality ($r_{14} = 0.651$; $p_{14} < 0.01$), hospital personnel ($r_{15} = 0.734$ $p_{15} < 0.01$) and with communications ($r_{16} = 0.649$; $p_{16} < 0.01$).

Second factor of customer satisfaction is administrative care which shows a significant and strong negative correlation with all other factors of perception, empathy ($r_1 = -0.231$ $p_2 < 0.01$) reliability ($r_2 = -0.220$; $p_2 < 0.01$), tangibility ($r_3 = -0.212$; $p_3 < 0.01$), responsiveness, ($r_4 = -0.250$ $p_4 < 0.01$). The factors of service delivery to showing results with correlating with security services ($r_5 = -0.126$ $p_5 < 0.01$), and weak or zero correlation with the item lab and diagnostic services ($r_6 = -0.035$; $p_6 < 0.01$), and with admission process ($r_7 = -0.214$; $p_7 < 0.01$), nursing services ($r_8 = -0.258$; $p_8 < 0.01$), housekeeping services ($r_9 = -0.189$; $p_9 < 0.01$) and no correlation with food service ($r_{10} = -0.009$; $p_{10} < 0.01$) and with patient care services ($r_{11} = -0.127$; $p_{11} < 0.01$). Similarly, in the case of correlation between administrative care and customer satisfaction, factors like availability ($r_{12} = 0.734$; $p_{12} < 0.01$), interaction ($r_{13} = 0.691$; $p_{13} < 0.01$), technical quality ($r_{14} = 0.704$; $p_{14} < 0.01$), hospital personnel ($r_{15} = 0.719$; $p_{15} < 0.01$) and with communications ($r_{16} = 0.690$; $p_{16} < 0.01$).

Third factor of customer satisfaction is interaction which shows a significant and strong negative correlation with all other factors of perception, empathy ($r_1 = -0.153$ $p_1 < 0.01$) reliability ($r_2 = -0.134$; $p_2 < 0.01$), tangibility ($r_3 = -0.125$; $p_3 < 0.01$), responsiveness, ($r_4 = -0.199$; $p_4 < 0.01$). The factors of service delivery to showing results correlating with security services ($r_5 = -0.106$; $p_5 < 0.01$), and weak or zero correlation with the item lab and diagnostic services ($r_6 = -0.049$; $p_6 < 0.01$), and with admission process ($r_7 = -0.179$; $p_7 < 0.01$), nursing services ($r_8 = -0.264$; $p_8 < 0.01$), housekeeping services ($r_9 = -0.168$; $p_9 < 0.01$) and no correlation with food service ($r_{10} = -0.029$; $p_{10} < 0.01$) and with patient care services ($r_{11} = -0.111$; $p_{11} < 0.01$). Similarly, in the case of correlation between interaction and customer satisfaction, factors like availability ($r_{12} = 0.660$; $p_{12} < 0.01$), administrative care ($r_{13} = 0.691$; $p_{13} < 0.01$), technical quality ($r_{14} = 0.599$; $p_{14} < 0.01$), hospital personnel ($r_{15} = 0.605$; $p_{15} < 0.01$) and with communications ($r_{16} = 0.726$; $p_{16} < 0.01$).

Fourth factor of customer satisfaction is technical quality which shows a significant and strong negative correlation with all other factors of perception, empathy ($r_1 = -0.247$; $p_1 < 0.01$) reliability ($r_2 = -0.273$; $p_2 < 0.01$), tangibility ($r_3 = -0.297$; $p_3 < 0.01$), responsiveness, ($r_4 = -0.311$; $p_4 < 0.01$). The factors of service delivery to showing results correlating with security services ($r_5 = -0.199$; $p_5 < 0.01$), lab and diagnostic services ($r_6 = -$

0.104; $p_6 < 0.01$), and with admission process ($r_7 = -0.309$; $p_7 < 0.01$), nursing services ($r_8 = -0.328$; $p_8 < 0.01$), housekeeping services ($r_9 = -0.263$; $p_9 < 0.01$) and no correlation with food service ($r_{10} = -0.037$; $p_{10} < 0.01$) and with patient care services ($r_{11} = -0.144$; $p_{11} < 0.01$). Similarly, in the case of correlation between technical quality and customer satisfaction, the factors like availability ($r_{12} = 0.651$; $p_{12} < 0.01$), administrative care ($r_{13} = 0.715$; $p_{13} < 0.01$), interaction ($r_{14} = 0.598$; $p_{14} < 0.01$), hospital personnel ($r_{15} = 0.700$; $p_{15} < 0.01$) and with communications ($r_{16} = 0.690$; $p_{16} < 0.01$).

Fifth factor of customer satisfaction is hospital personnel which shows a significant and strong negative correlation with all other factors of perception, empathy ($r_1 = -0.219$; $p_1 < 0.01$) reliability ($r_2 = -0.271$; $p_2 < 0.01$), tangibility ($r_3 = -0.288$; $p_3 < 0.01$), responsiveness, ($r_4 = -0.306$; $p_4 < 0.01$). The factors of service delivery to showing results correlating with security services ($r_5 = -0.152$; $p_5 < 0.01$), lab and diagnostic services ($r_6 = -0.103$; $p_6 < 0.01$), and good and significant negative correlation with admission process ($r_7 = -0.315$; $p_7 < 0.01$), nursing services ($r_8 = -0.301$; $p_8 < 0.01$), housekeeping services ($r_9 = -0.205$; $p_9 < 0.01$) and no correlation with food service ($r_{10} = -0.046$; $p_{10} < 0.01$) and with patient care services ($r_{11} = -0.134$; $p_{11} < 0.01$). Similarly, in the case of correlation between hospital personnel and customer satisfaction, factors like availability ($r_{12} = 0.734$; $p_{12} < 0.01$), interaction ($r_{13} = 0.719$; $p_{13} < 0.01$), technical quality ($r_{14} = 0.605$; $p_{14} < 0.01$), technical quality ($r_{15} = 0.715$; $p_{15} < 0.01$) and with communications ($r_{16} = 0.683$; $p_{16} < 0.01$).

Last factor of customer satisfaction is communication which shows a significant and strong negative correlation with all other factors of perception, empathy ($r_1 = -0.196$; $p_1 < 0.01$) reliability ($r_2 = -0.221$; $p_2 < 0.01$), tangibility ($r_3 = -0.203$; $p_3 < 0.01$), responsiveness, ($r_4 = -0.246$; $p_4 < 0.01$). The factors of service delivery to showing results correlating with security services ($r_5 = -0.131$; $p_5 < 0.01$), and weak or zero correlation with the item lab and diagnostic services ($r_6 = -0.042$; $p_6 < 0.01$), and good and significant negative correlation with admission process ($r_7 = -0.221$; $p_7 < 0.01$), nursing services ($r_8 = -0.270$; $p_8 < 0.01$), housekeeping services ($r_9 = -0.199$; $p_9 < 0.01$) and no correlation with food service ($r_{10} = -0.052$; $p_{10} < 0.01$) and patient care services ($r_{11} = -0.082$; $p_{11} < 0.01$). Similarly, in the case of correlation between communication and customer satisfaction, factors like availability ($r_{12} = 0.649$; $p_{12} < 0.01$), interaction ($r_{13} = 0.690$; $p_{13} < 0.01$), technical quality ($r_{14} = 0.726$; $p_{14} < 0.01$), hospital personnel ($r_{15} = 0.700$; $p_{15} < 0.01$) and with communications ($r_{16} = 0.683$; $p_{16} < 0.01$).

Conclusion

Hospital service quality is essential and paramount when we talk about the delivery of hospital services. The management of the administration of the hospital should try to get regular feedback from the patients and their attendants to assess the quality of the service delivery. They should include all those attributes which contribute to the overall quality of service delivery. If the services are wide but their impact and implementation are poor, it will result in dissatisfaction among the patients and their attendants and if the organization has fewer services but their impact & implementation is good will result in good satisfaction among the patients and their attendants.

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