Patient Satisfaction And Service Quality In Hospital At Raipur

Dr. R Shridhar*

*Kalinga University Raipur Chhattisgarh, Email – r.shridhar@kalingauniversity.ac.in

*Corresponding Author: Dr. R Shridhar
*Kalinga University Raipur Chhattisgarh, Email – r.shridhar@kalingauniversity.ac.in

Abstract
This study identified the relationship between qualities of hospital service with Patient satisfaction. The study was conducted in Oct 2022l to Jan 2023 using a quantitative descriptive-correlational research design. Of the 100 respondents, the hospital service was said to be in good (36.7%) and very good (63.3%) quality with a p value of 0.037 (<α 0.05). There was a significant relationship between quality service and patient satisfaction (OR 2.591). The 5 dimensions of client service such as reliability, responsiveness, assurance, empathy, and appearance were significant (p <0.05) and was correlated with quality of hospital services (r=0.973).

Keywords: Client satisfaction; Hospital management; Indonesia, Nursing.

INTRODUCTION
Background of the Study
The emergence of competition between hospitals in terms of medical support services is increasingly tight and sharp (Akbar and Parvez, 2009; Ming et al, 2010). Each hospital is required to enhance competitiveness by trying to provide satisfaction in terms of service to all patients (Zairi, 2000). The overall patient satisfaction with health care services is determined to a great extent by the length of time spent with their healthcare provider (Tjiptono, 2005). In addition, the demands and expectations of the community on the quality, comfort, and ease of health services are also increasing (Paramita, 2000).

There are two quality service concepts, namely quality of technical service, and quality of the art of care (Supranto, 1997). For hospitals, quality health care is very important as an effort to keep competing as a health service of choice for the community (Zairi, 2000). By providing quality health services, hospitals can increase income and patient visits (Saragih, 2009). This is because the quality of good service will provide satisfaction to the Patient.

Statement of the Problem
The development of existing hospitals in Indonesia, does not conduct a positive competition in order to survive and win the market in the field of health services industry (Kotler 1997/2008). Provisions of quality services to inpatient and outpatient are not addressed formally (Praptiwi, 2009). Both in terms of patient waiting time, communication, and services is also a problem (Pohan, 2007).

Assessment of the dimensions of quality of health services can be reviewed from health service providers, funders, and users of health services (Zairi, 2000). However, the assessment of the quality of health services should be guided by the basic nature of the provisions of health services that is to meet the needs of service users (patients), which is not done in Indonesia (Tjiptono, 2005; Taviyanda, 2010; Sugiyono, 2013; Saragih, 2009).

Aim of the Study
On account of these problems, this study is to identify the relationship between qualities of hospital services with Patient satisfaction.

Significance of Study
This study is significant to improve the quality

of services in hospital settings. It is also significant to increase knowledge among hospital leaders and managers to align the quality of hospital services in Indonesia.

METHODOLOGY
Research Design
The study was conducted in April to June 2017. We used a quantitative descriptive-correlational research design. The purpose is to detect the extent to which variations in a factor relate to one or more other factors based on their coefficients (Rencher, 2002).

Setting of the Study
The study took place at VY Hospital, Raipur. The hospital is at Salemba Tengah street RT.1/RW.4, Paseban, Senen. In VY Hospital the average patient visits 40-50 people per day, so for 1 month the number reaches an average of 1200-1500 people. The total bed capacity of this hospital is 200.

Ethical Consideration
This study was conducted after approval from Head of House (Director) at VY hospital. An explanation to the respondents about the research objectives and procedures were done. Confidentiality of records concerning respondent data is maintained. The data obtained from the respondents are also.

Sampling Technique
Simple random sampling technique was used where the samples are patients confined in the hospital. The inclusion criteria of sample selection in the study were as follows:
1. Patients who were confined
2. Can communicate well
3. Adults

While the exclusion criteria in the sample selection of this study are:
1. Patients with severe illness who are not medically subject to interference or cannot be interviewed.
2. Ages 18 years old and below.

Participants
Sample
Because of the limited time in this study the researchers took only 10% of the total bed patient per day (n=100). In determining the size of the sample the formula by Krejcie & Morgan (1970) was used

$$n = \frac{N}{1 + Ne^2}$$

Description:
n: number of samples
N: Number of Populations
e: level of error 5% (0,05) The sample in this study is:

$$n = \frac{130}{1+130(0.05)^2}$$
$$n = \frac{130}{1.32}$$
$$n = 100 \text{ patient}$$

Sampling Technique
Simple random sampling technique was used where the samples are patients confined in the hospital. The inclusion criteria of sample selection in the study were as follows:
1. Patients who were confined
2. Can communicate well
3. Adults

While the exclusion criteria in the sample selection of this study are:
1. Patients with severe illness who are not medically subject to interference or cannot be interviewed.
2. Ages 18 years old and below.

Data Collection
The research instrument used was a questionnaire. The questionnaire was adopted from various researches and edited. In order to test the temporary validity and determine the consistency level of the questions, reliability test was done (Sawyer, 2010; Polit & Beck, 2015). The questionnaire consists of two parts:
1. Patient's perception on quality service. This data relates to the level of patient satisfaction on the services provided. Patient satisfaction is assessed by using four categories of measurement: (1) Very Bad, (2) Not Good, (3) Good, and (4) Very Good categories. Questionnaires are divided into 5 dimensions: reliability, responsiveness, confidence, attention, and appearance. The questionnaire is reliable when Cronbach's Alpha is >0.7 (Polit & Beck, 2015;

Johnsone & dan Wichern, 2007).

2. Patients' satisfaction. This data was collected to find out how satisfied the patient felt after receiving services in the hospital. Patient satisfaction analysis was assessed using four categories of measurement: (1) Highly Unsatisfied, (2) Unsatisfied, (3) Satisfied, and (4) Very Satisfied categories.

Data Analysis

Both data in Microsoft Excel was tested using bivariate correlation analysis, and simple linear regression to determine whether or not the influence of quality service on patient was satisfactory. Other descriptive data were analyzed using SPSS version 21.

Test Validity

To determine the validity of the questionnaire as a research instrument, correlation between scores of each variable with the total scores were calculated (Johnsone & dan Wichern, 2007). Variables considered valid if the variable score correlated significantly with the total score (Rencher, 2002).

$$r_{XY} = \frac{N \sum XY - (\sum X)(\sum Y)}{\sqrt{\{N \sum X^2 - (\sum X)^2\}\{N \sum Y^2 - (\sum Y)^2\}}}$$

Information:
r = Product Moment Correlation X = Score Statement
Y = Total Score entire statement
XY = Score statement multiplied by the total score
N = Number of respondents pretest
Criterion validity of a question can be determined if:
a. r count> r table, then the questions on the questionnaire was valid.
b. count r <r table, then the questions on the questionnaire was not valid.

Test Reliability

Once the instrument was said to be valid, then the instrument should be said to be reliable that was, if the instrument was used to measure patient satisfaction, all respondents that were the same will then generate the same data. The reliability was used to calculate alpha formula (Sawyer, 2010; Rencher, 2002).

$$r_{11} = \left(\frac{n}{n-1}\right)\left(1 - \frac{\sum \sigma_1{}^2}{\sigma_t{}^2}\right)$$

Information:
r11 = reliability was sought
Σσ12 = total variance score for each item σt2 = total variance

The instrument was declared reliable if it has a value of coefficient alpha of ≥0.7 as stability of the alpha (Polit & Beck, 2015). This was interpreted in the following:
0.00 to 0.20 less reliable, having value 0.21 to 0.40 rather reliable, the value 0.41 to 0.70 quite reliable, while the value 0.71 to 0.90 reliable, and finally the value 0.91 to 1.00 is very reliable.

Univariate Analysis

Univariate analysis aimed to explain or describe the characteristics of each variable studied (Sawyer, 2010; Rencher, 2002; Polit & Beck, 2015). This data was collected through the questionnaire conducted on n=100 respondents. This Univariate data consisted of demographic data of respondents consisting of gender, age, nationality, location of respondent, work. The independent variables are responsiveness, empathy, reliability, tangibility and radiology service quality as dependent variable. Univariate analysis is shown in percent statistic size depicted by pie chart.

Bivariate Analysis

Bivariate analysis is done to see the relationship between free variable and dependent variable (Johnson & dan Wichern, 2007). The statistic test used is chi-square. The degree of confidence used is 95% ($\alpha = 0.05$). If P-value is less than α ($p < 0.05$) it means that there is significant (significant) relation of both variables studied. If P-value is greater than α ($p > 0.05$) it means there is no significant relationship between the two variables studied. To perform correlation test, we must obey 5 criteria (Kim, 2013):
- Data must be in paired
- Quantitative data
- Normally distributed data
- Two variables data must be linear

- Two variables data must be homoscedastic.

If the normality, linearity, and homoscedasticity are not violated, Chi-square is used (Kim, 2013). Chi- square test for independence or relatedness will help determine the relationship between two categorical data.

Multivariate Analysis

Multivariate analysis used in this research is linear regression. Linear regression analysis with more than one response variable (Y)

correlated and one or more predictor variables (X) (Johnson & dan Wichern, 2007). Passing the normality test may help correlate the 5 dimensions of service with client satisfaction (Kim, 2013).

Analyzing data is to identify the existence of relation between variables of a quantitative data which have accumulated in analysis by using correlation, and to identify whether there was an influence between quality services to patient satisfactions. The process of data analysis is summarized in table 1.

Table 1. *Distribution Data Analysis*

Research Question	Hypothesis	Questions asked	Analysis
What is the level of client satisfaction with the services		Do you think the hospital provide services according to a predate-rmined schedule? How satisfied are you with the cleanliness and tidiness Is the willingness of the Patient' questions evident? Do you think VY Hospital Hospital has information boards explaining services?	Percentage P Value < 0.005 Chi-Square (n=100) Odds Ratio
What is the quality of services	There is a relationship between quality of services and Patient' satisfaction	Do you think it is important to explain the services provided? Did your visitor/family experienced comfort at Hospital? Do you think it is important to provide fast service?	P Value < 0.005 Pearson Product Moment Simple Linear Regression
What is a relationship between quality of radiology services and Patient satisfaction		Do you think the accuracy of services is good since the beginning of admission? Do you think that the hospital is capable of disseminating clear information with Patient? Immediately after your examination, how comfortable are you with the hospital. VY Hospital? Do you think that the hospital is capable of disseminating clear information with Patient?	Correlation/R Multiple Linear Regression ANOVA

FINDINGS
Research Results

Research has been conducted on n=100 respondents. The patient satisfaction on radiology service was seen from 5 dimensions: (1) Tangibility, (2) Empathy, (3) Reliability, (4) Responsiveness, and (5) Assurance as

quality service provided by the hospital.

Demographic Data

The demographic data on table 2 is an overview of respondents who became the subjects for this study.

Table 2. *Demographic data*

	Caracteristic	Frequency	Percent
Gender	Male	40	40 %
	Female	60	60 %
	Total	100	100 %
Age	20-29	15	15 %

	30-39	25	25 %	
	40-49	45	45 %	
	50-59	10	10 %	
	60-69	5	5 %	
	Total	100	100 %	
Nationality	Local of birth	100	100 %	
	Total	100	100 %	
Location	Within 9 kilometers radius	50	50 %	
	Outside 9 kilometers radius	50	50 %	
	Total	100	100 %	
Occupation	Free lancer	10	10 %	
	Part-time / full time equivalent	60	60 %	
	Retired	5	5 %	
	Self-employed	25	25 %	
	Total	100	100 %	

Presentation of the 5 Dimensions Of the n=100 respondents, 47 people stated that they disagreed and felt less satisfied (46%), whereas respondents who agreed with the responsiveness dimension and felt satisfied were as much as 53%. Patient satisfaction is viewed from the empathy dimension were n=5 agreed and n=95 disagreed. For the dimension tangibility, the respondents both agreed (n=46) and disagreed (n=54). As for the dimensions of reliability n=30 disagreed and n=70 agreed. For the assurance dimension n=29 disagreed and n=71 agreed. Distributions of the 5 dimensions of satisfaction are highlighted on table 3.

Table 3. *The 5 Dimensions of Patient Satisfactions*

Dimensions	Parameters	Client Satisfaction		Total
		Not Satisfied	Satisfied	
Responsive ness	Dissagree	34	13	47
		72.3 %	27.7 %	100 %
	Agree	12	41	53
		22.6 %	77.4 %	100 %
	Total	46	54	100
		46.0 %	54.0 %	100%
Emphaty	Dissagree	5	0	5
		100 %	0 %	100 %
	Agree	41	54	95
		43.2 %	56.8 %	100 %
	Total	46	54	100
		46.0 %	54.0 %	100 %
Tangibility	Dissagree	32	14	46
		69.6 %	30.4 %	100 %
	Agree	14	40	54
		25.9 %	74.1 %	100 %
	Total	46	54	100
		46.0 %	54.0 %	100 %
Reliability	Dissagree	19	11	30
		63.3 %	36.7 %	100 %
	Agree	27	43	70
		38.6 %	61.4 %	100 %

		46	54	100
	Total	46 %	54 %	100 %
Assurance	Dissagree	20	9	29
		69.0 %	31.0 %	100 %
	Agree	26	45	71
		36.6 %	63.4 %	100 %
	Total	46	54	100
		46 %	54 %	100 %

Distribution of quality service

The quality of radiology service at the said hospital is good (40%), and very good (60%).

The distribution of respondents' answers to the quality of service is found on table 4.

Table 4. *Distribution of quality service*

Score	Criteria	Sum	Percentage	Total
3.00 – 5.25	Very Not Good	0	0 %	
5.26 – 7.50	Not Good	0	0 %	
7.51 – 9.75	Good	20	40 %	100%
9.76 – 12.00	Very Good	80	60 %	

Relation of Quality Service to Patients' Satisfaction Level

From Table 5, it can be explained that the group of patients who are not satisfied with the service states that they have received good service quality (60%) and very good (36.7%), while in the group of patients who are satisfied with the service states that they have been getting good (36.7%) and very good (63.3%), quality service (p=0.037 <α0.05). There is a significant relation between quality service and patient satisfaction level (OR 2.591).

Analysis of Variables

There is a correlation between patient satisfaction and quality service. Table 6 shows the relationship between quality services to patient satisfaction level of 0.983 with a significance value of 0.000. This means better service was given hence patient satisfaction is identified.

Table 6. *Correlation between patient satisfaction and quality service*

N	R	Sig.
100	0.983	0.000

Based on table 7, it is found that there is a significant influence of each quality dimension (reliability, responsiveness, assurance, empathy, and tangibility) to the satisfaction of the patient in terms of the quality linear regression tests that were used to identify relationship of quality services to patient satisfaction.

Table 8 shows the significance of the dimensions of reliability, responsiveness, assurance, empathy, and appearance (tangibility) with a significant value of 0.00 (p <0.05). All five dimensions together have a significant influence on the quality of service given (r=0.973). It can also be explained that the value of the 5 dimensions (r=2.745) are constant.

Table 8. *Analysis between the qualities of service to the level of satisfaction*

Dimension	Constanta	B	Adjusted R Square	R	Sig.
Reliability	2.745	0.874	0.973	0.983	0.000
Responsiveness		1.248			0.000
Assurance		0.847			0.000
Emphaty		0.838			0.000
Tangible		0.839			0.000

DISCUSSIONS OF FINDINGS

Strengths, Weaknesses, and Limitations The strength of this study is its design. Using mathematical expressions, we were able to correlate patient satisfaction and quality of services provided.

Furthermore, there are various aspects of this research that were beyond the control in the research process because of limited exploration. The lived experiences were not reported thereby narrowing the results to mathematical expressions.

The respondents were required to recall all incidents of quality service and patient satisfaction. It is therefore highly possible that the participants may have forgotten all the incidents. These were few challenges especially in reporting the findings. It was also emphasized to respondents to answer the questions truthfully to avoid biases. That is why it is important to discuss the factors affecting quality service to their satisfaction.

The generalization of the findings from this research may only be limited to the specific hospital where this study was conducted. However, should it be used worldwide, caution is advised. The culture and norms of the respondents have a correlation with the findings and results that is further discussed.

Patient Satisfaction

The questionnaire was done randomly to adult Indonesian respondents at VY hospital. Patient satisfaction among locals of Raipur is strongly influenced by perceptions of Indonesian hospital service (Hufron & Supratman. 2008). This means biases were encountered on a few respondents who disagreed.

In contrast to product marketing among

Indonesians, in the development of marketing strategies, hospital services should pay more attention to the limits of cultures (Cavanaugh, 1997; Akbar & Parvez, 2009). Word of mouth stories from both satisfied and unsatisfied adult customers can affect the service provided and seize new market segments (Hufron & Supratman. 2008; Krowinsky & Steiber, 1996).

Of the n=100 respondents, as many as n=54 were not satisfied and only n=46 were. The hospital provides services according to client needs with very clearly related to client diagnosis (Leebov & Scott, 1994).

There are several reasons why the Indonesian level of satisfaction can be different: (1) patients do not have a clear picture of their expectations on services they want. This is because their experience in their services is minimal or nonexistent to patients. In terms of physician service aspects, the services do not allow for interaction between physicians and patients and this occurs in all forms of service providers. (2) Most Indonesian patients are not given the freedom to choose a service (Paramita, 2000; Praptiwi, 2009). The choice is generally made by the insurer or the doctor (Hufron & Supratman. 2008).

However, some local Raipur respondents were truthful to say that the feeling of comfort generated by good means of infrastructure (Ming et al, 2010) was not met. Comfort should, among others, be supported by cool and comfortable room temperature, clean room conditions including toilets and sufficient seating availability as well as other facilities that support so patients do not feel bored when waiting (Kotler, 1997).

That is why hospital staff must use two-way

communication methods to make patients feel comfortable (Kotler & Armstrong, 2008) if infrastructure is temporarily inconvenient. Good communication also helps patients reduce anxiety while waiting for service results so as to decrease complaints of waiting time (Alma, 2003; Hufron & Supratman. 2008). Good interaction will create comfort while waiting (Hufron & Supratman. 2008). This sense of comfort will make patients feel appreciated, cared for and can reduce anxiety (Azwar, 1996) that leads to quality of service.

Quality of Service
The Indonesian respondents who stated "good" to the quality of services has a perception that the hospital is able to provide services as promised, such as emergency room that is ready in a fast paced environment for 24 hours; hospital employees willing to help patients who have difficulty; and hospital employees providing patient care with courtesy and professionalism. Also, it means that all hospital employees are well-groomed, have extensive knowledge of the systems, such as the location of the room(s), and the diagnosis of the patients (Akbar, 2009; Azwar, 1996; Pohan, 2007). Thus leads to the relationship of patient satisfaction with quality of service Relationship of patient satisfaction with quality of service

The result of statistical test with Chi-Square analysis is appropriate among n=100 respondents also passing the normality tests. This means that the findings of a relationship were reliable.

The dimension that has the lowest influence is the empathy. These results indicated that Patient feel the quality of service but are still lacking with empathy towards how they feel (Pohan, 2007).

The most dominant domain is responsiveness. The responsiveness dimension such as quick response and alertness in providing services have been well implemented (Saragih, 2009). There is an influence between the responsiveness of officers with the realization

of the quality of health services where the officers who have high responsiveness will increase patient satisfaction on services provided (Sugiyono, 2013). Therefore, Indonesian responsiveness in a hospital setting has been very good, where the health workers have been quick to response to serve the needs of the patients.

CONCLUSION AND RECOMMENDA-TIONS
Conclusion
In Indonesia patients were satisfied with the hospital service having good (36.7%) and very good (63.3%) quality of service with a p value of 0.037 ($<\alpha$ 0.05). There is a significant relationship between quality of service and patient satisfaction (OR 2.591).

The 5 dimensions such as reliability (reliability), responsiveness, assurance, empathy, and appearance (tangibility) are significant (p <0.05) and is correlated with the quality of hospital service (r=0.973). Empathy is the dimension that has the lowest influence on service quality.

Recommendations
Quality of service provided in Indonesia, should be maintained and if necessary more improved in order to improve patient satisfaction. The better the services provided, the more satisfied the patient feels.

Hospitals are expected to improve the quality of health services. Quality of service and patient satisfaction are related.

It is necessary to conduct further research on the quality of health services provided by communities with *Kabupaten* (lower-grade) locations and district public hospitals such as clinics or puskesmas.

RefеRENCES
1. Ekram S, Rahman F. The concept of patient satisfaction as it relates to contemporary health care. TAJ 2006; 19(1): TAJ: ISSN 1019-8555.
2. Silva AD. A framework for ensuring

responsiveness. GPE discussion paper series: No.32. World Health Organization.

3. Gill L, White L. A critical review of patient satisfaction. Leadership in Health Services 2009; 22(1): 8-19.

4. Sofaer S, Crofton C, Goldstein E, Hoy E, Crabb J. What do consumers want to know about the quality of care in hospitals? Health Serve Res 2005; 40; 2018-36

5. Renzi C, Abeni D, Picardi A, Agostini E, Melchi CF, Pasquini P, Puddu P, Braga M. Factors associated with patient satisfaction with care among dermatological outpatients. Br J Dermatol 2001; 145(4):617-23.

6. Schoenfelder T, Klewer J, Kugler J. Determinants of patient satisfaction: a study among 39 hospitals in an in-patient setting in Germany. International Journal for quality in Health carte 2011; 23(5):503-9.

7. Bamidele AR, Hoque ME, Van der Heever H. Primary satisfaction with the quality of care in a primary health care setting in Botswana. S Afr Fam Pract 2011;53(2): 170-5.

8. Khattak A, Alvi MI, Yousaf MA, Shah SZ, Turial D, Akhter S. Patient Satisfaction – A Comparison between Public & Private Hospitals of Peshawar. Int J Collab Res Inter Medi Public Health 2012; 4(5):713.

9. Debono D, Travaglia J. Complaints and patient satisfaction: a comprehensive review of the literature. Centre for Clinical Governance Research, University of New South Wales, Sydney, Australia. National Library of Australia. 2009.

10. Qidwai W, Ali SS, Baqir M, Ayub S. Patients expectations from an emergency medical service. J Ayub Med Coll Abbottabad 2005, 17(3): 3-6.

11. Ahmad M, Zafar A, Griffin S, Ahmad S, Orakzai N, Fayyaz F. An audit of patients' satisfaction after adult day-case surgery at Ayub Teaching Hospital, Abbottabad. J Ayub Med Coll Abbottabad 2005, 17(1):22-25.

12. . Qidwai W, Dhanani RH, Khan FM: Implications for the practice of a patient expectation and satisfaction survey at a teaching hospital in Karachi, Pakistan. J Pak Med Assoc 2003, 53(3):122-5.

13. Naseer M, Zahidie A, Shaikh BT. Determinants of patient's satisfaction with health care system in Pakistan: a critical review.Pak J Public Health'

1. Ekram S, Rahman F. The concept of patient satisfaction as it relates to contemporary health care. TAJ 2006; 19(1): TAJ: ISSN 1019-8555.
2. Silva AD. A framework for ensuring responsiveness. GPE discussion paper series: No.32. World Health Organization. 3. Gill L, White L. A critical review of patient satisfaction. Leadership in Health Services 2009; 22(1): 8-19. 4. Sofaer S, Crofton C, Goldstein E, Hoy E, Crabb J. What do consumers want to know about the quality of care in hospitals? Health Serve Res 2005; 40; 2018-36. 5. Renzi C, Abeni D, Picardi A, Agostini E, Melchi CF, Pasquini P, Puddu P, Braga M. Factors associated with patient satisfaction with care among dermatological outpatients. Br J Dermatol 2001; 145(4):617-23. 6. Schoenfelder T, Klewer J, Kugler J. Determinants of patient satisfaction: a study among 39 hospitals in an in-patient setting in Germany. International Journal for quality in Health carte 2011; 23(5):503-9. 7. Bamidele AR, Hoque ME, Van der Heever H. Primary satisfaction with the quality of care in a primary health care setting in Botswana. S Afr Fam Pract 2011;53(2): 170-5.