

# Analysis Factors of Hospital Services Quality and User Satisfaction

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## Analysis Factors of Hospital Services Quality and User Satisfaction

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**Abstract :** This study aims to identify the factors of service quality and user satisfaction Hospital type B in East Java and constraints the government's efforts in improving the quality of hospital services. Technique of the analysis of data in this study using descriptive analysis and factor analysis and also obtained by interview to director of hospitals.

The results showed that hospital users are women with the quality of hospital services is good, but there is still an effort to improve and based on that service quality established by 5 factors; clarity of procedures, employee competence, professionalism, effectiveness and competence. While user satisfaction built by 3 factors are tangible, reliability and empathy.

Constraints faced by the government in improving service quality is the limited medical and paramedical personnel, facilities and infrastructure, including the availability of medical equipment, low public awareness of service and the poor public image of hospital services.

**Keyword:** Services Quality, User Satisfaction; Health Services

### I. Introduction

The hospital is a very complex organization. In addition to technology-intensive, labor intensive and solid expert (Alfie, 2006). Hospitals in particular Regional General Hospital is required to provide services of a social nature to the community and also meet the needs of the Regional General Hospital (Hospital) itself

The role of business and society enormously in achieving the National Social Security System. In realizing the National Health Insurance, the Ministry of Health cannot work alone. To meet these three, needed a strong synergy between government and private sectors (including investors) or public (civil society) to complement and encourage the fulfillment of one of them through the mechanism of partnership or public-private partnership (PPP) and the fulfillment of social responsibility Companies (Corporate Social Responsibility / CSR), which is now the duty of every company. (Journal of Health, 2013).

Quality of service received by patients who come to the hospital is one of blooded measure of the hospital. It is therefore necessary to have a sustainable business, sustainable and comprehensive management of the hospital to provide care, thought and optimal cooperation in improving the quality of services to achieve patient satisfaction and achieve utilization occupancy rate (Bed Occupation Rate) is above optimal 75% because many hospitals that occupancy rate is still low at below 50%. (This is due to the high level of competition and the low level of quality of care received by patients. BOR is a comparison between the numbers of beds the number of patients undergoing inpatient treatment. BOR can be used as a benchmark for the efficiency of the hospital.

The fundamental problem in health care in hospitals is poor hospital services due to lack of medical and non-medical personnel, lack of infrastructure and availability of drugs. While also limited partnerships undertaken by the government with the private sector, especially with a large hospital. (Wihartoseno and MediKuswedi, 2010)

Based on the description of the background of the problem, the formulation of the problem that will be the focus of this study are as follows:

1. How does the quality of hospital care in East Java?
2. What factors are affecting the quality of service and user satisfaction Hospital in East Java?
3. How does the government's efforts in improving the quality of hospital services in East Java?
4. What constraints faced by the government in improving the quality of hospital services in East Java?
5. How does the government's efforts to overcome the obstacles in improving the quality of hospital services in East Java?

The purpose of this study are:

1. To describe and analyze the quality of hospital services in East Java
2. Describing and find the factors a lot of quality of service and user satisfaction hospitals in East Java
3. Describing and analyzing the government's efforts in improving the quality of hospital services in East Java
4. To describe and analyze the constraints faced by the government in improving the quality of hospital services in East Java

5. Describing and analyzing the government's efforts to overcome obstacles to improve the quality of hospital services in East Java.

## **II. Literature Review**

Satisfaction is defined by Zeithaml et al (2000) as:

"Satisfaction is the customer's fulfillment response. It is a judgment that a product or service features, or the product or service itself, Provides a pleasureable level of consumption related fulfillment".

Efforts to realize the total patient satisfaction is not easy. Mudie and Cottam (1993) states that the total patient satisfaction may not be achieved. However, efforts to repair or improvement of satisfaction can be done with a variety of strategies.

Robbins (2003) says, that satisfaction can be measured from the output-oriented measures throughput, efficiency and effectiveness (Robbins 2003). Meanwhile, according Luthan (1995), satisfaction can be measured by several indicators, among others word ward / demand, economy, efficiency, effectiveness and equity.

Further Tangkilisan (2005) assess the satisfaction measure is the volume of services, quality of service and the ability to obtain resources for implementing the program. Thoha (2009) explains that satisfaction associated with the assessment of quality management and quality execution of tasks / operations Hospital. Another aspect is the relationship with the hospital social environment with its political environment. The last aspect of the utilization of the expertise and experience of the members of the Hospital.

Assessment of satisfaction, James (2005) provides a measure of the efficiency and effectiveness. Understanding those aspects of efficiency in terms of output and input in other words something of activities that have been done efficiently if the implementation has reached the target (output) at the expense of the cost (input) the lowest or sacrifice a bit to the cost (input) is minimal, obtained results (output) which is desired.

Quality of service is a total experience that can only be evaluated by the patient (Zeithamal et al, 1988). While the quality of the services is the level of excellence expected and control over the level of excellence to meet the wishes of patients (Lovelock, 1988).

Quality has a close relationship with patient satisfaction. Quality gives an impetus to the patient to establish strong ties with the Hospital to understand carefully the patient's expectations (Kotler, 1999). Good quality service in the long term will generate loyalty patient, it will certainly reduce the cost of developing the profitability and market share (China, 1990; Daniel, 1992; Synchan, 1990).

## **III. Methods**

### **Population, Sample and Sampling Methods**

The population in this study are all hospitals in East Java, while the samples in this study were Type B hospitals in East Java, namely: RSUD Dr. SoebandiJember, RSUD Dr. Soedarsono, Pasuruan, RSUD Dr. Soedono Madiun, RSUD Dr. Soewandhi in Surabaya, RSUD Dr. SlametMartodirjo in Pamekasan and RSUD Dr. Sosodoro Djatikoesoemo in Bojonegoro. Sampling was done by purposive sampling, namely the Type B Hospital in East Java, on the grounds of the hospital already has a good hospital standards and can be used as references for hospitals below. Selection of hospitals based on the characteristics of respondents based on residency and the scale of the city. Selection of the sample of respondent's using accidental sampling

### **Data Analysis Technique**

After the data collected then analyzed using quantitative descriptive analysis and factor analysis.

## **IV. Result and Discussion**

Type B hospital is a general hospital that has the facilities and capabilities of medical services at least 11 specialist and sub-specialist is limited. Planned hospital type B is established in every capital of the province that holds the referral service of the hospital district. Type B hospitals in East Java there were 43 hospital.

Based on observations in mind that the hospital facilities for each hospital is not the same for each class. In general, the condition of the hospital room facilities as follows: room facility for class 1 generally an 2-3 rooms occupied by patients with existing facilities that have been put on the AC but some are still using a fan. Other facilities each room there is one bathroom. 2 class room facility contains between 3-4 patients fitted with a fan and a bathroom. While the room facilities Class 3 one-room bed contains between 3-8 and some containing 10 beds. One room there is one bathroom, which means that one bathroom for 10 patients, there was no fan facilities and each was given a bed divider curtain.

The results showed that most users of hospital services is BPJS participants. Most users work as civil servants and housewives.

Based on the survey results revealed that the quality of hospital services in East Java in either category this is indicated by the average value of the results of the questionnaire respondents is 3.87. Likewise with user satisfaction in the category of hospitals also satisfied with the service received by the average scale of 3.77.

**Factor Analysis**

The next analysis results related to the Total Variance Explained that shows the total amount of diversity that is able to be explained by a variety of factors that are formed. Factor analysis will be demonstrated by the component that has eigenvalue > 1 is a worn component. Based on the analysis of data obtained by the following table:

Tabel 1 : 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                   | 3.689         | 20.493       | 20.493                              | 3.689         | 20.493       | 20.493                            | 2.786         | 15.476       |
| 2         | 2.698               | 14.988        | 35.481       | 2.698                               | 14.988        | 35.481       | 2.158                             | 11.990        | 27.465       |
| 3         | 1.579               | 8.774         | 44.255       | 1.579                               | 8.774         | 44.255       | 2.114                             | 11.742        | 39.207       |
| 4         | 1.374               | 7.636         | 51.891       | 1.374                               | 7.636         | 51.891       | 1.816                             | 10.086        | 49.294       |
| 5         | 1.136               | 6.312         | 58.203       | 1.136                               | 6.312         | 58.203       | 1.604                             | 8.910         | 58.203       |
| 6         | .997                | 5.538         | 63.742       |                                     |               |              |                                   |               |              |
| 7         | .961                | 5.338         | 69.080       |                                     |               |              |                                   |               |              |
| 8         | .911                | 5.060         | 74.141       |                                     |               |              |                                   |               |              |
| 9         | .789                | 4.382         | 78.523       |                                     |               |              |                                   |               |              |
| 10        | .715                | 3.973         | 82.496       |                                     |               |              |                                   |               |              |
| 11        | .586                | 3.257         | 85.753       |                                     |               |              |                                   |               |              |
| 12        | .542                | 3.009         | 88.762       |                                     |               |              |                                   |               |              |
| 13        | .416                | 2.311         | 91.074       |                                     |               |              |                                   |               |              |
| 14        | .410                | 2.277         | 93.351       |                                     |               |              |                                   |               |              |
| 15        | .361                | 2.008         | 95.359       |                                     |               |              |                                   |               |              |
| 16        | .327                | 1.817         | 97.176       |                                     |               |              |                                   |               |              |
| 17        | .270                | 1.502         | 98.678       |                                     |               |              |                                   |               |              |
| 18        | .238                | 1.322         | 100.000      |                                     |               |              |                                   |               |              |

Extraction Method: Principal Component Analysis.

Results extract Principal Component Analysis shows the diversity that is formed for each factor, from the table above also looks eigenvalue for each factor are formed. Factor 1 has eigenvalue of 3.689, a factor of 2 at 2.698, a factor of 3 at 1.579 and 1.374 and a factor of 4 by a factor of 5 1.136.

The amount of diversity that can be explained by the first factor (after rotation) the diversity of the initial data can be explained by 15.476 percent. The second factor explaining the diversity of the initial data (after rotation) can be explained by 11.990 percent. The third factor to explain the diversity of initial data according to the method of extraction by factor analysis (after rotation) the diversity of the initial data can be explained by 11.742 percent. The fourth factor explains the diversity of the initial data according to the method of extraction by factor analysis can be explained by 10.086 percent. The fifth factor explains the diversity of the initial data according to the method of extraction by factor analysis (after rotation) the diversity of the initial data can be explained by 8.910 percent.

Tabel 2 : Rotated Component Matrix<sup>a</sup>

|    | Component |       |       |       |       |
|----|-----------|-------|-------|-------|-------|
|    | 1         | 2     | 3     | 4     | 5     |
| x1 | .815      | -.008 | -.111 | -.093 | .029  |
| x2 | .824      | .139  | .195  | .035  | -.181 |
| x3 | .803      | .051  | -.101 | -.058 | -.104 |
| x4 | .116      | .287  | .515  | -.034 | .000  |
| x5 | .143      | .048  | .600  | .217  | -.016 |
| x6 | .421      | .473  | .287  | .228  | -.104 |

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|     |       |       |       |       |       |
|-----|-------|-------|-------|-------|-------|
| x7  | .262  | .615  | .176  | -.008 | -.166 |
| x9  | -.074 | .163  | .547  | -.009 | .147  |
| x10 | -.078 | -.075 | .741  | .037  | .078  |
| x11 | .501  | -.148 | .243  | -.047 | .494  |
| x12 | .449  | -.146 | .403  | .362  | .211  |
| x13 | -.026 | .338  | .205  | .669  | -.297 |
| x14 | -.048 | -.103 | -.010 | .742  | .133  |
| x15 | -.153 | -.020 | .081  | .056  | .695  |
| x16 | .013  | .610  | .410  | -.136 | .333  |
| x18 | -.152 | .765  | -.088 | .151  | .073  |
| x19 | -.068 | .448  | .137  | .391  | .508  |
| x20 | -.025 | .301  | .051  | .609  | .491  |

Extraction Method: Principal Component Analysis.  
 Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 9 iterations.

After varimax rotation factor method, obtained as above table. In the Rotated Component Matrix detect any difference correlation values of variables on each factor. You can also see that each variable simply correlated strongly with one factor alone.

Based on the results of the factor analysis, as in the table above, the obtained 5 (five) factor analysis. Each factor consists of several indicators. As for the members of each of the following factors:

1. Factor 1: some variables have a strong correlation with factor 1 is X1, X2, X3, X11 and X12
2. Factor 2: some variables have a strong correlation with factors 2 is X6, X7, X16 and X18
3. Factor 3 several variables have a strong correlation with factor 3 is X4, X5, X9 and X10
4. Factor 4 some variables have a strong correlation with factor 4 is X13, X14 and X20
5. Factor 5 a few variables have a strong correlation with factor 5 is X15 and x19

Based on study results, the first factor was named the clarity of the procedure, the second factor named employee capability, professionalism third factor, the fourth factor effectiveness of service and fifth factors competence Medical Team.

Thus the factors that affect the quality of services consists of 5 factors:

1. Clarity procedures include: ease of service procedures, suitability of service requirements, the fairness of fees for service
2. The ability of employees include: the ability of employees, speed of service, the relationship with the patient and medical personnel patient freedom in determining the choice
3. Professionalism includes: employee discipline, employee responsibilities in providing services, employee courtesy and friendliness of employees
4. The effectiveness of the service include: the accuracy of the implementation of the service, the comfort of the environment, the effectiveness of the services of doctors and nurses
5. Competence medical team includes: security in the service of knowledge and competence of medical personnel.
- 6.

**User Satisfaction Factors Hospitals**

Furthermore, to find the user satisfaction hospital factors used factor analysis with measures such as the analysis of service quality. Based on the analysis of data obtained table Total Variance Explained as follows:

Tabel 3 : Total Variance Explained

| Component | Initial Eigenvalues | Extraction Sums of Squared Loadings |               |              | Rotation Sums of Squared Loadings |               |              |        |        |
|-----------|---------------------|-------------------------------------|---------------|--------------|-----------------------------------|---------------|--------------|--------|--------|
|           |                     | Total                               | % of Variance | Cumulative % | Total                             | % of Variance | Cumulative % |        |        |
| 1         | 2.625               | 32.817                              | 32.817        | 2.625        | 32.817                            | 32.817        | 1.935        | 24.192 | 24.192 |
| 2         | 1.440               | 18.005                              | 50.823        | 1.440        | 18.005                            | 50.823        | 1.771        | 22.135 | 46.328 |
| 3         | 1.087               | 13.592                              | 64.414        | 1.087        | 13.592                            | 64.414        | 1.447        | 18.087 | 64.414 |
| 4         | .828                | 10.356                              | 74.771        |              |                                   |               |              |        |        |

|   |      |       |         |
|---|------|-------|---------|
| 5 | .698 | 8.728 | 83.499  |
| 6 | .592 | 7.400 | 90.899  |
| 7 | .442 | 5.523 | 96.422  |
| 8 | .286 | 3.578 | 100.000 |

Extraction Method: Principal Component Analysis.

Results of Principal Component Analysis to extract user satisfaction hospitals show the diversity that is formed for each factor, from the table above also looks eigenvalue for each factor are formed. Factor 1 has eigenvalue of 2.625, a factor of 2 of 1.440, a factor of 3 at 1.087.

After a thorough analysis of factors, KMO Bartlett and test Rotation Component Matrix question then of nine items, the remaining 8 questions were then based on the results of the factor analysis can be grouped into three (3) groups.

Here are the results of the analysis of user satisfaction variable factor for the hospital.

Tabel 4 : Rotated Component Matrix<sup>a</sup>

|    | Component |       |       |
|----|-----------|-------|-------|
|    | 1         | 2     | 3     |
| y1 | -.051     | .189  | .807  |
| y2 | .378      | .363  | .212  |
| y4 | .208      | .051  | .811  |
| y5 | -.028     | .789  | .270  |
| y6 | .125      | .880  | -.018 |
| y7 | .680      | .427  | .097  |
| y8 | .826      | .088  | -.032 |
| y9 | .765      | -.122 | .103  |

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 4 iterations.

After Varimaxrotation factor method, derived tables Rotated Component Matrix which explains the difference in the value of the variable correlation to each factor. You can also see that each variable simply correlated strongly with one factor alone.

Based on the results of the factor analysis, as in the table above, the obtained 3 factors analysis. Each factor consists of several indicators or question items. As for the members of each of the following factors:

- Factor 1: some variables that have a strong correlation with the first factor, namely y2, Y7, Y8 and Y9
- Factor 2: some variables that have a strong correlation with two factors, namely y5, y6
- Factor 3 several variables that have a strong correlation with the third factor, namely y1, y4

Thus the factors affecting user satisfaction hospital consists of 3 factors:

- Factor 1: satisfaction with hospital facilities (tangible),
- Factor 2: satisfaction with medical equipment (reliability),
- Factor 3: the satisfaction of employee awareness (empathy)

### Efforts to improve the quality of service

Given the quality of service still needs to be improved, the government made efforts to improve the quality of hospital services. As for the government's efforts in improving the quality of hospital services are:

- increase the competence of human resources by developing science and technology and give opportunity to the doctor to follow specialist program
- improving hospital infrastructure, the efforts made by the government are: Increasing the number of patient rooms, hospital facility improvement, Improved medical equipment
- Improved quality of service  
Hospital quality improvement can be done in various ways, proposed ISO, to increase the standardization of service quality through accreditation.
- The development of superior service type
  - Service High Care Unit (HCU) heart
  - Services Pediatric Intensive Care Unit (PICU) and Neonatal Intensive Care Unit (NICU)
  - Services CT Scan 64 Slices
  - Eye Minimally Invasive Surgery Services

- 5) Central Surgery Installation Services (IBS)
- 6) Service 24 hours PONEK
- e. The development of innovation programs
- 1. The hospital is expected to create innovative programs related to health activities, for example, held a scientific seminar which aims to transfer the latest medical science information to health professionals and the public. The goal is the health workers and the general public. In addition, the government through the hospital health counseling, nutritional counseling, psychological counseling, provision of nutritious food, and simple health checks such as blood pressure checks, check blood sugar, uric acid and cholesterol, and weighing Weight.
- f. Increased quantity of human resources  
Government efforts to increase the number of which is increasing the number of HR medical and paramedical personnel, hold equity placement of general practitioners and specialists.
- g. Structuring organizations

### Constraints faced by the government in improving the quality of services

The Government constantly strives to improve the quality of health services from time to time, it is evident from improvements in the health services in the community. Increasing number of hospitals that appears shows the government's concern for the health services. Only the emergence of private hospitals are not good quality an obstacle for the government to improve the public hospital service area. This has an impact on the ratio of doctors and patients in public hospitals the higher areas which will further degrade the quality of service. Besides the limited number of doctors in the general hospital, the other obstacle in efforts to improve the quality of service are limited facilities and infrastructure in the hospital today, including buildings. There are hospitals that its capacity has been inadequate, so there needs to be additional buildings.

Limitations of human resources: the number of workers who do not meet the standards (the ratio of doctors and patients is still high): lack of general practitioners, specialists, midwives, nursing, medical non nursing would be very disturbing increase in the quality of hospital services.

Another obstacle faced by public hospitals in improving the quality of service is limited medical and non-medical equipment. This is possible because of the high price of the equipment. As for the conduct of such equipment requires funding / budget is very large. Associated with efforts to improve quality of service, then the other constraints faced by the government are limited facilities and health infrastructure is an important factor in the effort to improve the quality of service. Weak public support in following the rules that exist in hospitals, including the rules for visiting hours.

## V. Conclusion

Based on the results of research funding as in the description of data analysis in the previous chapter, it can be concluded as follows:

1. According to the user's perception of hospital services in East Java type B stated that the quality of hospital services in both categories, but still needs to be improved. Based on the results of factor analysis showed that the factors that shape the quality of service there are five factors namely clarity factor service procedures, employee competence, professionalism, effectiveness and competence of medical services.
2. Based on the results of research using questionnaires note that the user satisfaction of hospital services in East Java type B in the category are satisfied. Based on factor analysis showed that the factors that shape the satisfaction of users of hospital services there are three factors: satisfaction with the physical facilities (tangible), satisfaction with medical equipment (reliability) and satisfaction with the care of medical and non-medical person (empathy).
3. Government efforts in improving the quality of hospital services is as follows:
  - a. Improve the quality and quantity of human resources
  - b. Improve infrastructure
  - c. Improve the quality of services include providing superior service
  - d. The development of innovation programs
  - e. Structuring organizations
4. Factors constraints faced by the government in an effort to improve the quality of hospital services is as follows:
  - a. Limited facilities and infrastructure in the hospital today, including building
  - b. Bad service image is already attached to the government hospital insociety
  - c. Limitations of human resources: the number of workers who do not meet the standards (the ratio of doctors and patients is still high): lack of general practitioners, specialists, midwives, nursing, medical non nursing.
  - d. Lack of medical and non-medical equipment

- e. Regulations related to the development of hospitals into Public Service Board (BLUD)
- f. Low public support in following the rules that exist in RS

### **Implication**

Based on the above, it is needed repair service district general hospitals in anticipation of competition with private hospitals. In addition, there needs to be a change the bad image the public on the quality of general hospital services area. Therefore, in this study provide input to the government in this case related department policy holders as follows:

- a. Improvement of human resources in terms of quantity (amount according to standard) and quality
- b. Increased availability of medical equipment
- c. Fulfillment of standards-compliant infrastructure RS
- d. Expand networking with stakeholders
- e. Increased access to services
- f. Procurement and equitable distribution of human resources specialists

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