

# THE EFFECT OF SERVICE QUALITY PERFORMANCE ON PATIENT EXPERIENCE IN RADIOLOGICAL INSTALLATIONS OF UNSOED PURWOKERTO ORAL AND DENTAL HOSPITAL

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## ABSTRACT

**Introduction:** In terms of improving quality health service facilities, it is closely related to the service quality performance carried out by medical personnel in hospitals. Service quality performance can provide satisfaction and positive experiences to patients when they use services at the hospital. Patient experience is a core component of the quality of service provided by medical personnel in improving the quality of services at the hospital. Patient experience in improving hospital services can be measured by access, interpersonal communication, continuity and coordination, comprehensiveness of service and trust. Services in the Radiology Installation are very useful for a doctor and patient in making a diagnosis and treatment plan. **Purpose:** Based on this background, the researcher wanted to know how the service quality performance of the services at the Radiology Installation in improving patient experience. **Methodology:** The type of this research was descriptive quantitative research. The study population was patients who used the services at the Radiology Installation at the Oral and dental Hospital of Unsoed Purwokerto. The number of research samples was 37 people who were taken using total sampling technique. Data collection in this study was carried out through a questionnaire method that distributed to respondents which contained attributes that were used as indicators (measuring instruments). **Results:** The results showed that the patient experience based on access, interpersonal communication, comprehensive of service, and trust were in the agree category with the respective percentages as follows 53,4%; 95%; 60,4 % and 58,6%. Meanwhile, services related to continuity and coordination, it was known that the most responses were in the disagree category with a percentage of 51,4%. **Conclusion:** Of the five indicators of patient experience, almost all respondents agreed with the performance of service quality at the Radiology Installation, Oral and dental Hospital of Unsoed Purwokerto.

**Keywords:** Service Quality Performance; Patient Experience; Radiology Installation

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## 1. Introduction

The development of hospitals in Indonesia has increased from year to year, which aims to make it easier for various parties to participate in building health service facilities in hospitals through efforts to increase the coverage and quality of health services for every service user in the hospital. Improving quality health service facilities in hospitals is closely related to service quality performance carried out by medical personnel, doctors and nurses. Service quality performance is the performance of health services that can provide satisfaction to each service user according to the level of service satisfaction where the implementation is in accordance with the health service standards set by the hospital and the Indonesian government. An important

element in improving health services is the level of service quality performance and fulfillment of established service standards<sup>2</sup>.

The performance of the quality of health services can provide satisfaction and positive experiences for patients in using existing services at the hospital. Patient experience is an important result of medical care and is a core component of the quality of service provided in improving the quality of services at the hospital<sup>3</sup>. The effect of patient experience in improving hospital services can be measured in terms of access, interpersonal communication, continuity and coordination, comprehensiveness of service, trust towards medical personnel in hospital health facilities<sup>4</sup>. Measuring patient experience is an important component in providing health care and improving the treatment given, meeting patient expectations and monitoring service quality performance<sup>5</sup>.

One of the health facilities in hospital that is used often to provide support for health services is the Radiology Installation. The use of radiology installation service has long been recognized that has an important role in assisting diagnosis and determining treatment plans<sup>6</sup>. Services at the Radiology Installation produce X-rays, for example in the field of dentistry, such as panoramic and periapical images which are very important for a dentist, especially to see whether any abnormalities that are not visible if only seen by doing an intraoral examination. Thus, an X-ray is a supporting examination that is very helpful for a dentist in determining the diagnosis and treatment plan for the patient<sup>7</sup>. The use of services in radiology installations plays an important role in the diagnosis and treatment plan for dentists that aim to provide accurate data to provide quality services for patients or service users in hospitals. Based on this, researcher wanted to see how much the effect of patient experience does while they are using the services at the Radiology Installation on the service quality performance provided by medical personnel in improving the quality of services as a support for determining diagnosis and treatment plans for patients.

## **2. Literature Review**

### *2.1 Service Quality Performance*

Services are all activities or benefits that are basically intangible, which can be given to others. Services provided by consumers have a more abstract nature so that consumers' reactions in evaluating these services are carried out through what they feel (perceived service quality)<sup>7</sup>. The measure of service quality is based on performance. Service performance is the performance of the service received by the consumers themselves where they assess the quality of the service they receive<sup>8</sup>. Service performance must be a very important factor to be considered by every service industry, so that "*Moment of Truth*" can be displayed properly in the minds of consumers in order to achieve a perfect service image<sup>9</sup>. From several existing theories, it can be concluded that service quality performance is a comprehensive assessment of consumers regarding the results of services provided or felt when consumers receive a service from a service provider, so that the quality of service provided can be more precise and specific. In addition, consumers will have experience when undergoing services provided by service providers<sup>10</sup>.

### *2.2 Patient Experience*

Patient experience is defined as patient experience. Experience is a way to obtain the truth of knowledge that has been felt or lived. Patient experiences are feedback from patients, namely about what actually happened during the time they received treatment or treatment, both related

to objective facts and subjective views about it<sup>12</sup>. Patient experiences include the various interactions that patients have with the health care system, including services from health plans and from doctors, nurses, medical personnel, doctors' offices and other health care facilities. The main dimensions for measuring the patient's experience with health services are as follows:

- Access, including easy access to first contact, accommodation and easy economic access
- Interpersonal communication, namely communication in general, full of respect, sharing information on every decision and loyal service to everyone
- Continuity and Coordination, is the continuity of relationships, continuity of information, coordination, benefits and functions of the work team
- Comprehensive Services, which are related to the types of services provided.
- Trust, is a sense of trust and confidence in the existing health service system<sup>13</sup>

The patient's experience during treatment is the beginning of the patient's assessment of the various health service activities they receive, as well as health facilities and infrastructure related to the delivery of health services<sup>14</sup>.

### *2.3 The Correlation between Service Quality Performance and Patient Experience*

Experience provides distinct memories for consumers. In this case, if consumers get positive memories, this will lead to satisfaction for them so that they are happy to share their experiences with others<sup>15</sup>. Experience creates unique value for its customers and greatly influences satisfaction, consumer recommendation behavior and service quality. However, relying on services alone is not enough to achieve long-term benefits, so experience must be accompanied by<sup>16</sup>. In the health sector, patient experience is an indicator in measuring the quality of service by placing patients at the center of service in hospitals<sup>17</sup>. Patient experience is a dimension of service quality. Therefore, it is important for the hospital to be able to find out how the patient experience while getting service at the hospital<sup>18</sup>. Experience of good quality can create good service quality performance as well and will make them tend to share their experiences with others<sup>19</sup>.

### *2.4 Hospital Radiology Installation*

A radiology installation in a hospital is a health service unit that is used to support the enforcement and therapy of each patient. The use of x-rays in radiology installations has long been recognized as a tool in general medicine and dentistry which is very helpful in making a diagnosis and for determining treatment plans. The radiology installation has several staff and employees who are in charge of the X-ray operation. In addition, medical personnel and nurses in radiographic installations are tasked with installing equipment or supporting examinations when seeing the patient's health condition, which is in accordance with the direction of the doctor or dentist. Medical personnel and nurses at the Radiology Installation carry out their duties very carefully because they have the risk of radiation when using X-rays. The safety of medical personnel and nurses in the Radiology Installation must be prioritized because it will affect their performance in carrying out their duties. Related to this, the hospital management system needs to conduct training and education for medical personnel and nurses in radiology installations every year to provide the latest knowledge and improve the performance of hospital staff and employees on duty, with the aim of maintaining and improving the quality and quality of service so that still able to satisfy service users in Radiology Installation<sup>19</sup>.

Based on the explanation above, the hypotheses in this study are as follows:

H1: There is an effect of service quality performance on the patient experience in the access dimension

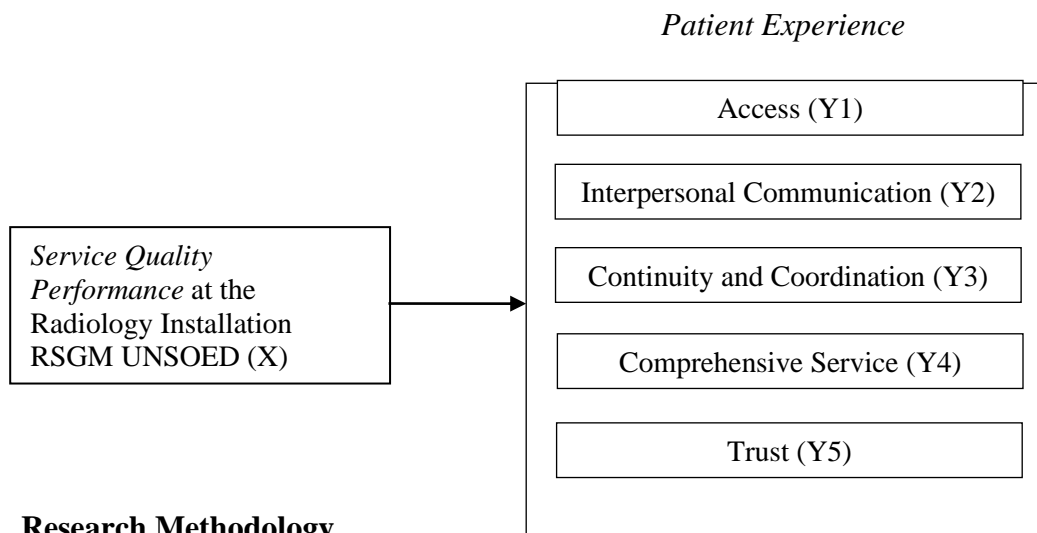
H2: There is an effect of service quality performance on patient experience in the interpersonal communication dimension

H3: There is an effect of service quality performance on patient experience in the dimensions of continuity and coordination

H4: There is an effect of service quality performance on patient experience in the comprehensive service dimension

H5: There is an effect of service quality performance on the patient experience in the dimension of trust

Figure 1 shows the research model with 5 research hypotheses as follows:



### 3. Research Methodology

The research method used in this research was a cross sectional quantitative research method that measures the relationship or the effect of the variables studied at one time<sup>20</sup>. This research was conducted at the Radiology Installation RSGM Unsoed Purwokerto. The research targets were patients who used the services at the Radiology Installation at the Oral and Dental Hospital of UNSOED Purwokerto. Respondents in the study consisted of 37 people who were obtained using a total sampling technique. The data collection method used was through a questionnaire distributed to respondents which contains attributes that were used as indicators (measuring instruments).

### 4. Research Results

#### 4.1 Reliability Test and Validity

##### 4.1.1 Reliability Test

Reliability test is used to show how much the relative measurement result is consistent when used to measure the same aspects. The principle of measuring reliability is to use one shot and measure the correlation between the answers to the

questions. A product is said to be reliable if the Cronbach Alpha  $\alpha > 0.70$ . Table 1 shows that this model has met the reliability test.

Table 1. Reliability Test Result

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .813             | 16         |

#### 4.1.2 Validity Test

The validity test with the construction validity technique was carried out by using the factor analysis test, namely correlating the total factor score with the total score. The validity test is declared valid if  $r > 0.312$ . From the analysis of the validity of the *Pearson* correlation, it was found that all questions had valid results, namely  $r > 0.312$ .

#### 4.2 Analysis of the normality test

The normality test was carried out using the Kolmogorov Smirnov with the help of SPSS. If the probability  $< 0.05$  indicates that the data is declared normally distributed, conversely, if the probability value is  $> 0.05$  then the data is declared to be not normally distributed.

##### 4.2.1 Access

Table 2. One-Sample Kolmogorov-Smirnov Test

|                                  |                | Standardized Residual |
|----------------------------------|----------------|-----------------------|
| N                                |                | 37                    |
| Normal Parameters <sup>a,b</sup> | Mean           | 0E-7                  |
|                                  | Std. Deviation | .98601330             |
| Most Extreme Differences         | Absolute       | .159                  |
|                                  | Positive       | .159                  |
|                                  | Negative       | -.089                 |
| Kolmogorov-Smirnov Z             |                | .970                  |
| Asymp. Sig. (2-tailed)           |                | .304                  |

a. Test distribution is Normal.

b. Calculated from data.

##### 4.2.2 Interpersonal Communication

Table 3. One-Sample Kolmogorov-Smirnov Test

|                                  |                | Standardized Residual |
|----------------------------------|----------------|-----------------------|
| N                                |                | 37                    |
| Normal Parameters <sup>a,b</sup> | Mean           | 0E-7                  |
|                                  | Std. Deviation | .98601330             |
| Most Extreme Differences         | Absolute       | .180                  |
|                                  | Positive       | .167                  |
|                                  | Negative       | -.180                 |
| Kolmogorov-Smirnov Z             |                | 1.094                 |
| Asymp. Sig. (2-tailed)           |                | .182                  |

a. Test distribution is Normal.

b. Calculated from data.

#### 4.2.3 Comprehensive Service

Table 4. One-Sample Kolmogorov-Smirnov Test

|                                  |                | Standardized Residual |
|----------------------------------|----------------|-----------------------|
| N                                |                | 37                    |
| Normal Parameters <sup>a,b</sup> | Mean           | 0E-7                  |
|                                  | Std. Deviation | .98601330             |
| Most Extreme Differences         | Absolute       | .126                  |
|                                  | Positive       | .115                  |
|                                  | Negative       | -.126                 |
| Kolmogorov-Smirnov Z             |                | .768                  |
| Asymp. Sig. (2-tailed)           |                | .597                  |

a. Test distribution is Normal.

b. Calculated from data.

#### 4.2.4 Continuity and Coordination

Table 5. One-Sample Kolmogorov-Smirnov Test

|                                  |                | Standardized Residual |
|----------------------------------|----------------|-----------------------|
| N                                |                | 37                    |
| Normal Parameters <sup>a,b</sup> | Mean           | 0E-7                  |
|                                  | Std. Deviation | .98601330             |
| Most Extreme Differences         | Absolute       | .117                  |
|                                  | Positive       | .117                  |
|                                  | Negative       | -.080                 |
| Kolmogorov-Smirnov Z             |                | .713                  |
| Asymp. Sig. (2-tailed)           |                | .689                  |

a. Test distribution is Normal.

b. Calculated from data.

#### 4.2.5 Trust

Table 6. One-Sample Kolmogorov-Smirnov Test

|                                  |                | Standardized Residual |
|----------------------------------|----------------|-----------------------|
| N                                |                | 37                    |
| Normal Parameters <sup>a,b</sup> | Mean           | 0E-7                  |
|                                  | Std. Deviation | .98601330             |
| Most Extreme Differences         | Absolute       | .181                  |
|                                  | Positive       | .107                  |
|                                  | Negative       | -.181                 |
| Kolmogorov-Smirnov Z             |                | 1.104                 |
| Asymp. Sig. (2-tailed)           |                | .175                  |

a. Test distribution is Normal.

b. Calculated from data.

### 4.3 Moderated regression analysis

To show the effect of service quality performance on patient experience, multiple linear regression analysis was carried out with the following equation:

$$Y=a+b_1X_1 +b_2X_2 +b_3X_3 + e$$

#### 4.3.1 Access

Tabel 7. Linear Regression Test

| Model |            | Sum of Squares | Df | Mean Square | F      | Sig.              |
|-------|------------|----------------|----|-------------|--------|-------------------|
| 1     | Regression | 40.968         | 1  | 40.968      | 18.205 | .000 <sup>b</sup> |
|       | Residual   | 78.762         | 35 | 2.250       |        |                   |
|       | Total      | 119.730        | 36 |             |        |                   |

- a. Dependent Variable: Akses  
b. Predictors: (Constant), SQP

The results showed that service quality performance had an effect on patient experience (access) as evidenced by a sig value of 0.000 ( $p < 0.05$ ).

#### 4.3.2 Interpersonal communication

Tabel 8. Linear Regression Test

| Model |            | Sum of Squares | Df | Mean Square | F      | Sig.              |
|-------|------------|----------------|----|-------------|--------|-------------------|
| 1     | Regression | 34.866         | 1  | 34.866      | 16.785 | .000 <sup>b</sup> |
|       | Residual   | 72.701         | 35 | 2.077       |        |                   |
|       | Total      | 107.568        | 36 |             |        |                   |

- a. Dependent Variable: Interpersonal Communication  
b. Predictors: (Constant), SQP

The results showed that service quality performance had an effect on patient experience (interpersonal communication) as evidenced by a sig value of 0.000 ( $p < 0.05$ ).

#### 4.3.3 Comprehensive service

Tabel 9. Linear Regression Test

| Model |            | Sum of Squares | Df | Mean Square | F      | Sig.              |
|-------|------------|----------------|----|-------------|--------|-------------------|
| 1     | Regression | 37.884         | 1  | 37.884      | 17.696 | .000 <sup>b</sup> |
|       | Residual   | 74.927         | 35 | 2.141       |        |                   |
|       | Total      | 112.811        | 36 |             |        |                   |

- a. Dependent Variable: Comprehensive of Service  
b. Predictors: (Constant), SQP

The results showed that service quality performance had an effect on patient experience (comprehensive service) as evidenced by a sig value of 0.000 ( $p < 0.05$ ).

#### 4.3.4 Continuity and coordination

Tabel 10. Linear Regression Test

| Model |            | Sum of Squares | Df | Mean Square | F      | Sig.              |
|-------|------------|----------------|----|-------------|--------|-------------------|
| 1     | Regression | 18.834         | 1  | 18.834      | 16.535 | .000 <sup>b</sup> |
|       | Residual   | 39.868         | 35 | 1.139       |        |                   |

|       |        |    |  |  |
|-------|--------|----|--|--|
| Total | 58.703 | 36 |  |  |
|-------|--------|----|--|--|

a. Dependent Variable: Continuity and Coordination

b. Predictors: (Constant), SQP

The results showed that service quality performance had an effect on patient experience (continuity and coordination) as evidenced by a sig value of 0.000 ( $p < 0.05$ ).

#### 4.3.5 Trust

Table 11. Linear Regression Test

| Model | Sum of Squares | Df     | Mean Square | F      | Sig.   |                   |
|-------|----------------|--------|-------------|--------|--------|-------------------|
| 1     | Regression     | 31.564 | 1           | 31.564 | 20.663 | .000 <sup>b</sup> |
|       | Residual       | 53.463 | 35          | 1.528  |        |                   |
|       | Total          | 85.027 | 36          |        |        |                   |

a. Dependent Variable: Trust

b. Predictors: (Constant), SQP

The results showed that there was an effect of service quality performance on patient experience (trust) because sig 0.000 ( $p < 0.05$ ).

## 5. Discussion

This study found that there was a positive correlation between service quality performance and patient experience related to several aspects, namely access, interpersonal communication, comprehensive service, continuity and coordination and trust. Based on research conducted by Rohtman et al (2008) regarding the Hospital Consumer Assessment of Healthcare Provider and Systems survey in hospitals, communication and performance carried out by medical personnel, staff or doctors has the strongest relationship to consumer assessment and willingness to service quality that is given and is able to provide a positive experience to the patient. In addition, if the performance of medical personnel in the hospital is poor due to stress or excessive workload, this can have a negative impact on the quality of service so that the patient's good experience with the perceived service will be reduced. The results of this study indicated that effect of service quality performance on patient experience is very influential while receiving services at the hospital

## 6. Conclusion

Based on the results obtained from this study, it can be concluded that the service quality performance performed by doctors, workers or employees at the hospital has a major influence on patient experience in providing services at the hospital. Furthermore, to improve the performance of the workforce or employees in serving patients in the hospital, the roles that hospital agencies can play include providing employee training and giving rewards.

The limitation of this study is none other than the current condition, which makes it very difficult for researcher to find data from respondents who experience services at the hospital. It is recommended for further research to carry out research other than in the radiology installation, considering that the hospital has several other facilities in its services that are very supportive in treating patients.

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