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## Physician satisfaction analysis in using integrated referral system (SISRUTE) at RSUD H. Padjonga Dg. Ngalle Takalar<sup>☆</sup>



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### KEYWORDS

Integrated referral system;  
SISRUTE;  
DeLone and mclean;  
Hot-fit

### Abstract

**Objective:** The Integrated Referral System (SISRUTE) is a health service referral system that regulates the delegation of tasks and responsibilities which are processed in an integrated manner. The study aims to analyze the system used, system quality, information quality, and service quality toward physician satisfaction in using the Integrated Referral System (SISRUTE).  
**Methods:** The sample in this study was physicians who served in the ED, as many as 33 respondents. Using a mixed method with cross-sectional design.

**Results:** The results showed that there was no relationship ( $p=0.126 > 0.05$ ) between humans in using the system with physician satisfaction in using SISRUTE, there was no relationship ( $p=0.393 > 0.05$ ) between system quality and physician satisfaction in using SISRUTE, there is a relationship ( $p=0.002 < 0.05$ ) information quality with physician satisfaction in using SISRUTE, and there is a relationship ( $p=0.001 < 0.05$ ) service quality with physician using SISRUTE.

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### Introduction

SISRUTE is the implementation of health services that regulate the delegation of duties and responsibilities of health services reciprocally, vertically and horizontally, where the entire referral process is carried out in an integrated manner.<sup>1</sup>

Referral system is one of the problems at hospitals, especially for health workers, one of the problems faced is the delay in the process of handling patients because of adequate health care facilities only in big cities. When the

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patient comes to the regional health service center, and it turns out that the area does not have adequate equipment, then inevitably the patient must be referred to a more adequate hospital.<sup>2</sup>

## Method

### Location and research design

This research was carried out at the RSUD (Regional Hospital) H. Padjonga Dg. Ngalle Takalar Regency. This type of research uses mixed method with a cross sectional design.

### Population and sample

The study population was physician in the emergency department, totaling 35 people. In this study, total sampling was used, because there were limited research samples, which were 33 people.

### Data collection method

Taking quantitative data through a questionnaire using a Likert scale, then proceed with the collection of qualitative data through the interview method.

### Data analysis

Data were analyzed by Microsoft Excel Program for Windows using sample distribution (univariate) and chi-square test (bivariate). The results of interviews or qualitative data are related to the analysis of the data in order to strengthen quantitative data.

## Results

**Table 1**

shows six indicator of system use where the best level indicator is the frequency of use with a percentage of 81.1%. The worse indicator level is training with a percentage of 46.2%. The system use indicator in RSUD H. Padjonga Dg. Ngalle is interpreted in a good category.

Table 1 shows that of the 4 indicators of service quality variables where the best level indicator is empathy with a percentage of 66.7%. The worst level is responsiveness after use with a percentage of 59.1%. The quality indicator system is interpreted in a good category, and 3 variable indicators of user satisfaction (doctor) where the best level indicator is efficiency with a percentage of 53%. The worst level is overall satisfaction with a percentage of 44.7%. The physician satisfaction indicator is interpreted in a fairly good category.

Table 2 shows results of the chi square test obtained a value of  $p=0.126$ . This shows that there is no relationship in system use toward physician satisfaction in using SISROUTE.

Table 3 shows results of the chi square test obtained a value of  $p=0.393$ . This shows that there is no relationship between system quality and physician satisfaction in using SISROUTE.

Table 4 shows results of the chi square test obtained a value of  $p=0.002$ . This shows that there is a relationship

**Table 1** Frequency distribution of system use, system quality, information quality, and service quality of SISROUTE.

| Indicator                                   | Jumlah Kuantitas (n) | Persentase (%) |
|---|----------------------|----------------|
| <b>System use</b>                           |                      |                |
| <i>Use frequency</i>                        | 33                   | 100            |
| <i>Agree</i>                                | 33                   | 100            |
| <i>Disagree</i>                             | 0                    | 0.0            |
| <i>Dependency</i>                           |                      |                |
| <i>Agree</i>                                | 22                   | 66.7           |
| <i>Disagree</i>                             | 11                   | 33.3           |
| <i>User friendly</i>                        |                      |                |
| <i>Agree</i>                                | 12                   | 36.4           |
| <i>Disagree</i>                             | 21                   | 63.6           |
| <i>Training</i>                             |                      |                |
| <i>Agree</i>                                | 6                    | 18.2           |
| <i>Disagree</i>                             | 27                   | 81.8           |
| <i>Knowledge</i>                            |                      |                |
| <i>Agree</i>                                | 28                   | 84.8           |
| <i>Disagree</i>                             | 5                    | 15.2           |
| <i>System acceptance</i>                    |                      |                |
| <i>Agree</i>                                | 21                   | 63.6           |
| <i>Disagree</i>                             | 12                   | 36.4           |
| <b>System quality</b>                       |                      |                |
| <i>Easy to used</i>                         |                      |                |
| <i>Agree</i>                                | 24                   | 72.7           |
| <i>Disagree</i>                             | 9                    | 27.3           |
| <i>Easy to learned</i>                      |                      |                |
| <i>Agree</i>                                | 29                   | 87.9           |
| <i>Disagree</i>                             | 4                    | 12.1           |
| <i>Access speed</i>                         |                      |                |
| <i>Agree</i>                                | 11                   | 33.3           |
| <i>Disagree</i>                             | 22                   | 66.7           |
| <i>Reliability</i>                          |                      |                |
| <i>Agree</i>                                | 13                   | 39.4           |
| <i>Disagree</i>                             | 20                   | 60.6           |
| <i>Flexibility</i>                          |                      |                |
| <i>Agree</i>                                | 21                   | 63.6           |
| <i>Disagree</i>                             | 12                   | 36.4           |
| <i>Advantages of features and functions</i> |                      |                |
| <i>Agree</i>                                | 16                   | 48.5           |
| <i>Disagree</i>                             | 17                   | 51.5           |
| <i>Security</i>                             |                      |                |
| <i>Agree</i>                                | 23                   | 69.7           |
| <i>Disagree</i>                             | 10                   | 30.3           |
| <b>Information quality</b>                  |                      |                |
| <i>Accuracy</i>                             |                      |                |
| <i>Agree</i>                                | 6                    | 18.2           |
| <i>Disagree</i>                             | 27                   | 81.8           |
| <i>Completeness</i>                         |                      |                |
| <i>Agree</i>                                | 4                    | 12.1           |
| <i>Disagree</i>                             | 29                   | 87.9           |
| <i>System form</i>                          |                      |                |
| <i>Agree</i>                                | 21                   | 63.4           |
| <i>Disagree</i>                             | 12                   | 36.4           |
| <i>Actual</i>                               |                      |                |
| <i>Agree</i>                                | 2                    | 6.1            |
| <i>Disagree</i>                             | 31                   | 93.9           |

**Table 1 (Continued)**

|                                   |    |      |
|-----------------------------------|----|------|
| <i>Relevance</i>                  |    |      |
| Agree                             | 11 | 33.3 |
| Disagree                          | 22 | 66.7 |
| <b>Service quality</b>            |    |      |
| <i>Responsiveness</i>             |    |      |
| Agree                             | 13 | 39.4 |
| Disagree                          | 20 | 60.6 |
| <i>Technical ability</i>          |    |      |
| Agree                             | 16 | 48.5 |
| Disagree                          | 17 | 51.5 |
| <i>Empathy</i>                    |    |      |
| Agree                             | 23 | 69.7 |
| Disagree                          | 10 | 30.3 |
| <i>After use service</i>          |    |      |
| Agree                             | 16 | 48.5 |
| Disagree                          | 17 | 51.2 |
| <b>Physician satisfaction</b>     |    |      |
| <i>Effective</i>                  |    |      |
| Agree                             | 6  | 18.1 |
| Disagree                          | 27 | 81.9 |
| <i>Efficient</i>                  |    |      |
| Agree                             | 11 | 33.3 |
| Disagree                          | 22 | 66.7 |
| <i>Comprehensive satisfaction</i> |    |      |
| Agree                             | 10 | 12.1 |
| Disagree                          | 23 | 69.7 |

**Table 2** Relation between system use and physician satisfaction in using Integrated Referral System (SISRUTE).

| System use | Physician satisfaction |          | Total<br>N | p     |
|------------|------------------------|----------|------------|-------|
|            | High<br>n              | Low<br>N |            |       |
| Good       | 11                     | 10       | 21         | 0.126 |
| Worse      | 3                      | 9        | 12         |       |

**Table 3** Relation between system quality and physician satisfaction in using Integrated Referral System (SISRUTE).

| System quality | Physician satisfaction |          | Total<br>N | p     |
|----------------|------------------------|----------|------------|-------|
|                | High<br>n              | Low<br>N |            |       |
| Good           | 14                     | 8        | 22         | 0.393 |
| Worse          | 0                      | 11       | 11         |       |

**Table 4** Relation between information quality and physician satisfaction in using Integrated Referral System (SISRUTE).

| Information quality | Physician satisfaction |          | Total<br>N | p     |
|---------------------|------------------------|----------|------------|-------|
|                     | High<br>n              | Low<br>n |            |       |
| Good                | 8                      | 8        | 16         | 0.002 |
| Worse               | 6                      | 11       | 17         |       |

**Table 5** Relation between service quality and physician satisfaction in using Integrated Referral System (SISRUTE).

| Service quality | Physician satisfaction |          | Total<br>N | p     |
|-----------------|------------------------|----------|------------|-------|
|                 | High<br>n              | Low<br>n |            |       |
| Good            | 11                     | 4        | 15         | 0.001 |
| Worse           | 3                      | 15       | 18         |       |

between the information quality and physician satisfaction in using SISRUTE.

Table 5 shows results of the chi square test obtained a value of  $p=0.001$ . This shows that there is a relationship between service quality and physician satisfaction in using SISRUTE.

Based on the interviews result the use of SISRUTE is a mandatory system for patient referrals, physician find it difficult to do SISRUTE together when examining other patients and waiting for SISRUTE answers and processes. This interview quote below:

*"in my opinion, the frequency of using SISRUTE will increase, because it is a referral system that must be filled if you want to refer patients." (MM, 26 years, general practitioner)*

*"I have never received SISRUTE training directly from the organizers." (NUA, 28 years old, general practitioner)*

The results of interviews regarding the variable quality of the system, it is known that SISRUTE is easy to learn by reading the manual and practicing on its own, doctors find it easy to use after frequent use, SISRUTE is highly dependent on the internet network and response from referral hospitals, This is like the following interview quote below:

*"very much depends on the internet network." (DI, 27 years old, general practitioner)*

*"SISRUTE is actually of good value, but with the use of SISRUTE, more and more patients are difficult to refer to. Especially if the patient's condition is unstable". (IH, 29 years old, general practitioner)*

The results of interviews regarding information quality variables, it is known that the information contained in SISRUTE is not fully accurate and complete, the display of SISRUTE is considered quite good, data on referral recipient hospitals are not always updated, but patient data is actual. This is like the following interview quote below:

*"the data on the availability of beds, facilities, blood banks are not updated, it can be seen in the data that is still available" (Data indicators are always updated)*

The results of interviews regarding the variable quality of service, it is known that there is no response from the SISRUTE provider if there is a problem that is complained. This is like the following interview quote below:

*"If the system is down and there is a problem, no one can be contacted. So we have to wait a long time for the*

system to recover.” (AML, 28 years old, general practitioner)

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## Discussion

The results of this study show that there is no relationship ( $p=0.126$ ) system use with physician satisfaction in using SISRUITE. The results of this study support the research conducted by Livari, Widodo and Wahyuni.<sup>3-5</sup> Use is not proven to affect the impact of individuals, so it can be concluded that based on usage, the higher the intensity of use (SIMDA) does not affect the individual.

The results are known that there is no relationship ( $p=0.393$ ) system quality with physician satisfaction in using SISRUITE. The same thing was found by Hanadia which states that system quality does not affect user satisfaction.<sup>6</sup> This researcher shows that the importance of the system has a negative influence on user satisfaction.

The results of this study indicate there is a relationship ( $p=0.002$ ) the quality of information with physician satisfaction in using SISRUITE. Some studies show that information quality is considered not as a separate component but rather as an entity of comprehensive user satisfaction, or information quality related to user satisfaction.<sup>7,8</sup>

The results of this study indicate that there is a relationship ( $p=0.001$ ) on the quality of service to physician satisfaction in using SISRUITE. Empirical studies have shown that service quality contributes to individual performance. Therefore, it is feasible to be included as a dimension to the success of information systems.<sup>9</sup>

## Conclusions

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The results showed that there was no relationship ( $p=0.126$ ) between humans in using the system with physician satisfaction in using SISRUITE, there was no relationship ( $p=0.393$ )

between system quality and physician satisfaction in using SISRUITE, there is a relationship ( $p=0.002$ ) information quality with physician satisfaction in using SISRUITE, and there is a relationship ( $p=0.001$ ) service quality with physician satisfaction in using SISRUITE. The results of this study can be used to improve and create new features on SISRUITE.

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## Conflict of interest

The authors declare no conflict of interest.

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