

## Analysis of Infrastructure for Covid-19 Patient Satisfaction at RSDI Banjarbaru City

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### ABSTRACT

Patient satisfaction is a condition of fulfilling the wishes, expectations and needs of patients. Bases on data from March 2020 to March 2021, there was an increase in patients returning home at their own request by 3% and the lack of fulfillment of patient satisfaction values which were still below 90%. The aim of this study is to evaluate Infrastructure and compliance of covid-19 patients. The study desing used was cross sectional, whit a consecutive sampling and a sample size of 120 covid-19 patients. Data were analyzed using the spearman rank rest. Data collection was carried out from June 2021 to August 2021. The result of the study found that there was a relationship between physycal facility and satisfaction with p value 0,001 and r 0,498. The better infrastructure provide, the higher pastient satisfaction.

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### INTRODUCTION

The 2019 coronavirus (covid-19) pandemic is an ongoing health problem in more than 200 countries around the world. (1). Covid-19 has been identified as a mode of transmission through droplets and was first discovered in Wuhan.(2). As of March 31, 2020, there

were 719,758 confirmed cases worldwide. The death toll related to COVID-19 also reached 33,673 worldwide. The pandemic has resulted in a rapid surge in the field of research in response to these conditions.(1)

As of March 31, 2020, Indonesia has 1528 confirmed cases of COVID-19 and

136 deaths. The death rate in Indonesia is also much higher than the People's Republic of China (8.9% vs. 4%).(3)

At the beginning of the pandemic, Indonesian health facilities were not ready to deal with COVID-19. Great preparations should be taken seriously at the beginning of the spread of the disease in the People's Republic of China.(4) Professor Joseph Wu warned all parties in early January 2020 at that time, he stated that 2019-nCov could become a global epidemic. He also suggested that a preparedness plan should be prepared by ensuring the availability of medicines, personal protective equipment (PPE) and health facilities needed to deal with the pandemic.(5)

Based on data from the Ministry of Health, there are 309,100 hospital beds in Indonesia, most of which at the beginning of the pandemic focused on the island of Java. In addition, there are less than 6000 intensive care units nationwide. Judging from the value, it is indeed large, but in fact Indonesia only has 3 ICU beds per 100000 people and thus this value is one of the lowest in Asia.(6)

Based on this, the Indonesian government through the Ministry of Health at the end of March 2020 issued a policy regarding COVID-19 referral hospitals. Each province has prepared several COVID-19 referral hospitals. Meanwhile, in South Kalimantan Province, RSDI of Banjarbaru City has become one of the referral hospitals for COVID-19 referrals. As a referral hospital, RSDI moved quickly by building two new rooms, namely the COVID-19 treatment room and the COVID-19 ICU room and modifying the three treatment rooms into Covid-19 treatment rooms. The number

of beds provided for COVID-19 cases is 90 beds for the COVID-19 treatment room and 6 beds for the COVID-19 ICU. The addition of rooms and modifications to existing treatment rooms require changes to the treatment room facilities so that patients still feel comfortable when being treated in a special room for COVID-19. Why should it be comfortable because during treatment, patients are required to isolate themselves during treatment in order to break the chain of transmission.

So that while undergoing isolation treatment in the treatment room, it is necessary to improve the treatment room facilities including by providing television facilities in each treatment room, air conditioning in each treatment room, wifi that can be reached by all treatment rooms, exhaust fans so that air ventilation is good, room cleanliness which is always observed twice a day.

However, the above is inversely proportional to the data obtained, from March 2020 to March 2021, the trend increases by 3%, while patient satisfaction ranges from 76% to 80%. Based on this, an assessment of the Covid-19 treatment room facilities at the Banjarbaru City Hospital is needed. Therefore, this study aims to evaluate the infrastructure and satisfaction of Covid-19 patients treated at the Banjarbaru City Hospital.

The results of this evaluation are expected to be used as evaluation material and input in order to improve the quality of services for Covid-19 patients at the Banjarbaru City Hospital.

## METHOD

This study used a cross sectional study design. This research was conducted from June 2021 to August 2021 at the Idaman Regional Hospital, Banjarbaru City. The population in the study were COVID-19 patients who were treated in the Parakeet, Cassowary and Murai treatment rooms. The sampling technique used is non-probability sampling, namely consecutive sampling with a sample size of 120 respondents. The inclusion criteria were patients with a length of stay of more than 3 days, fully aware, and willing to be respondents, while the exclusion criteria were patients with severe and critical severity who were not included in this study.

Measurement of facilities and infrastructure as well as patient satisfaction using a questionnaire that has previously been tested for validity and reliability. The results of the validity test of the facilities and infrastructure questionnaire were 0.446 to 0.874 and the reliability of Cronbach's alpha was 0.915. While the patient satisfaction questionnaire, the value of the validity test showed in the range of 0.62 to 0.79 and the reliability test was 0.95.

The analysis used to see the relationship between infrastructure and patient satisfaction with COVID-19 at the RSDI Banjarbaru City uses Pearson correlation if the assumptions are met, but if it is not met, the researcher uses Spearman rank with an alpha value of 0.05 and 95% CI. Data processing using STATA ver.9 . program

## HASIL DAN PEMBAHASAN

The distribution of the frequency of COVID-19 patients at the Banjarbaru

City Hospital based on the characteristics of respondents and the assessment of infrastructure and patient satisfaction in 2021 can be seen in Table 1 below:

Table 1. Shows that each variable has a missing value where the respondent does not fill in the assessment, so the data obtained does not describe the information from the respondent.

The characteristics in this study also consist of age, length of stay, patient satisfaction, facilities and infrastructure which can be seen in Table 2 below:

Based on Table 2, the average age of respondents is 49 years with a median value of 52 years and a standard deviation of 13.3 years and there are missing values of 9 respondents who do not fill in. The average length of stay for Covid-19 patients is 8 days with a media value of 7 days and a standard deviation of 4.9 days and there is a missing value of 1 respondent. The average patient satisfaction ranged from 45.8 with a median of 48 and a standard deviation of 8.4. In facilities and infrastructure, the average value is 31.1 with a median value of 31 and a standard deviation of 3.3.

The results of research conducted in the Covid-19 treatment room at the Banjarbaru City Hospital showed the average value of infrastructure was 31.3 out of 120 respondents, the percentage of the average score was 70% of the highest total score. This shows that the overall infrastructure for the COVID-19 treatment room is sufficient. The lowest parameter for infrastructure is the availability of wifi which is not so good. This could be because the wifi capacity provided is not sufficient for demand in the treatment room.

Table 1. Description of Respondents Characteristics

<b>Variable</b>	<b>f</b>	<b>Percentage (%)</b>
<b>Gender</b>		
<b>Man</b>	54	45
<b>Woman</b>	64	53.3
<b>Missing data</b>	2	1.7
<b>Level of education</b>		
<b>College</b>	44	36.7
<b>Middle education</b>	63	52.5
<b>basic education</b>	0	0
<b>No school</b>	0	0
<b>Missing data</b>	13	10.8
<b>Work</b>		
<b>Retired</b>	6	5
<b>PNS/TNI/POLRI</b>	19	15.8
<b>Honorary staff</b>	7	5.8
<b>Farmers/Fishermen/Gardening</b>	1	0.8
<b>Private/Traders</b>	14	11.7
<b>Student/Student</b>	0	0
<b>Unemployment</b>	11	9.2
<b>Missing data</b>	62	51.7
<b>Marital status</b>		
<b>Marry</b>	89	74.2
<b>Single</b>	7	5.8
<b>Widow or widower</b>	5	4.2
<b>Missing data</b>	65	15.8
<b>History of being treated with other diseases</b>		
<b>Once</b>	16	29.2
<b>Never</b>	35	13.3
<b>Missing data</b>	69	57.5
<b>History of being treated with covid-19</b>		
<b>Once</b>	5	4.2
<b>Never</b>	52	43.3
<b>Missing data</b>	63	52.5

A Range of amenities, such as a choice of food, shops, a restaurant, postage, IT facilities, telephone, TV/radio access and chaplains, improve patient and staff wellbeing, while regular childcare

services support seven-day staff working. Importantly, neither patients nor service should be constrained by the physical environment, but the environment should be configure to be fit for purpose, with a

Table 2 Description of Respondents Characteristics

Variable	Mean	median	SD	Min-Max	Missing data
Age	49.4	52	13.3	16-84	9
Length of Stay	8.1	7	4.9	3-24	1
Patient Satisfaction	45.8	48	8.4	19-65	0
Facilities and infrastructure	31.3	31	3.3	21-45	0

high degree of cleanliness and should be sufficiently flexible to serve all patients, including both the physically and mentally disabled.(7)

As for the assessment in terms of satisfaction, the average value is 45.8 with the percentage of the average value being 74% of the highest total score. Assessment of patient satisfaction shows that it is still less than optimal or does not meet the minimum standards. Minister of Health Regulation no.129 of 2008 explains that the minimum standard value of patient satisfaction in inpatient installations is > 90%.(8). The lowest parameter of patient satisfaction is responsiveness with an average of 12.4 (67%) of the highest total score.

Responsiveness is a dynamic quality, individual assessments related to aspects of the fast or slow service vary depending on the perception of each individual. Therefore, the responsiveness of nurses is an important thing in supporting the quality of nursing services. The power of a nurse when the patient is in need of the nurse's reliability and ability to be alert to various situations and conditions, including the attitude in handling the needs and complaints of patients.(9)

Responsiveness describes the performance of nurses when carrying out treatment so that it helps patients and the services provided are not slow so that

they make patients feel comfortable. So that responsiveness is associated with service time, it can be from the time the patient calls until the nurse is present beside the patient. Some of the obstacles faced when providing care in the Covid-19 treatment room are when the patient calls for help, the nurse cannot directly enter the room. provide assistance, but need to use PPE first. The use of this PPE takes 10-15 minutes.

Bivariate analysis was carried out to determine the relationship between infrastructure and patient satisfaction with COVID-19, while the results of the bivariate analysis can be seen in Table 3 below:

Table 3 shows the relationship between infrastructure and patient satisfaction with COVID-19 at the Banjarbaru City Hospital, from a total of 120 respondents, a p-value of 0.001 with a correlation coefficient of 0.498 was obtained, then  $H_0$  was rejected, meaning that there was a relationship between facilities and infrastructure on the satisfaction of Covid-19 patients, but The strength between these two variables is moderate and the direction of the relationship is positive, which means that the better the available infrastructure, the higher the patient's satisfaction. Likewise, if the infrastructure is inadequate, patient satisfaction will also decrease.

Table 3. The relationship of facilities and infrastructure to the satisfaction of Covid-19 patients at RSDI Banjarbaru City

Variable	Patient Satisfaction	
	P	r
Facilities and infrastructure	0.001	0.498

Service facilities health can be defined as utilization collaboration process all health facilities and infrastructure effectively and efficiently for provide services directly professional in the field of facilities and infrastructure in the service process effective and efficient health aslo. Completeness good infrastructure is very important thing ini create customer satisfaction. Service quality more difficult to evaluate compared to the goods. (10)

Based on the above, it is important to note that infrastructure greatly influences patient satisfaction. This is supported by several previous studies conducted by Calisir, et al in 2012 which found that infrastructure is an important factor in patient satisfaction and influences the decision to return to health services at the hospital.(11). In addition, the results of research conducted by Nyorong, et al in 2014 also revealed that adequate health service facilities according to service needs can improve the quality of services in health institutions.(12)

The quality of the physical environment is the condition of the physical appearance of the complete service and the atmosphere created and felt by the patient. This concept is the actualization of intangible characteristics.(13)

Health facilities are defined as a complete physical support of a building, especially a hospital. Patients will be satisfied if the hospital facilitates the needs of the patient

in the healing process. Not only that, another factor that supports a quality service is the fast and friendly nurse service. These two things, namely facilities and service quality will encourage increased patient satisfaction, especially inpatients.(14)

The feature of physical service deals with the perception of the patients regarding the hospital environment, cleanliness, etc. A number of scholar tried to find out the effect of the physical facilities on the quality of service delivery. (15)

**LIMITATION**

The limitations of this study are the number of missing data on the characteristics of the respondents, the sampling technique used creates a selection bias in the course of this research and the analysis only looks at two variables without analyzing the cofounding in them, so that the results obtained have a cofounding bias.

**RESEARCH ETHICS**

This study pays attention to aspects of autonomy, benefit and informed consent. Researchers provide an explanation of the benefits and objectives of the study to the respondents. In addition, this research has passed the ethical test at the RSDI Research Ethics Committee.

**CONFLICT OF INTEREST**

No conflict of interest was found in this study.

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## CONCLUSION

The conclusion in this study is that the infrastructure for the Covid-19 treatment room is 31.3, while the average patient satisfaction is 45.8. There is a significant relationship between infrastructure and patient satisfaction with COVID-19 at the Banjarbaru City Hospital ( $p = 0.001$  and  $r = 0.498$ ), meaning that the better the hospital infrastructure, the higher the patient satisfaction.

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