

Inpatient and Outpatient Satisfaction Comparison of Radiology Installation Service Quality at Private Hospital

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ABSTRACT

The challenge faced by a hospital during undercontrolled the Covid-19 pandemic is to continue to provide health services quality, in this case, radiology installation service, with patient outcomes being satisfied with the existing services. The purpose of this study was to analyze inpatient and outpatient satisfaction comparison of radiology installation service quality at private hospital. Methods: This analytic survey research used a cross sectional approach. The samples were taken by total sampling method on as many as 30 inpatients and 30 outpatients in private hospital. Statistical data analysis using SPSS Independent T Test for satisfaction comparison and Mann Whitney U Test for various dimensions of service comparison. Results: There was no significant difference in satisfaction (Sig. value 0.136) and various dimensions such as reliability, responsiveness, assurance, empathy, and tangibles of service (Sig. value 0.945; 0.267; 0.134; 0.516; 0.163) between inpatients and outpatients at private hospital. Conclusion: Hospital must improve the quality of all dimensions of radiology installation service to increase all patients satisfaction, not only inpatient but also outpatient satisfaction.

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INTRODUCTION

The development of technological advances makes industrial players in Indonesia make more efforts to meet the needs of a dynamic society. One of the health industries in Indonesia is the hospital. The hospital is one of the facilities in the service sector that has an important role in providing health services according to quality standards as a reference in providing patient-oriented services (Menkes, 2018). The quality of health services is the degree to which the needs of the community or individuals are met in accordance with professional standards by utilizing resources fairly, efficiently, effectively in all limitations as indicated by the level of patient

satisfaction (Respati, 2014). Therefore, patient satisfaction is one indicator of the success of health services.

Coronavirus Disease 2019 (Covid-19) is endemic globally affecting almost all countries in the world and Indonesia has become part of the pandemic (El-Sayed, Aleya, & Kamel, 2021), (Nugraha, et al., 2020). Information related to exposure to Covid-19 and its handling is a challenge that will affect the quality of health services provided by hospitals. Hospitals with good quality, even in a pandemic, are very dependent on available resources, such as the services of doctors, nurses, staff and available facilities and infrastructure, including environmental security (Kelmanutu, 2013).

In the hospital system, radiology installations play an important role in influencing patient satisfaction. In radiology installations, various patients and various diseases are served (Lang, et al., 2013). Routinely, the medical imaging community seeks to improve for example by creating methods to improve image quality or decrease patient exposure, new applications for imaging equipment and new technologies and modalities (Watson & Odley, 2018). However, there are still differences in the experience gained by outpatients and inpatients in radiology installations. These patients usually do not see a radiology specialist nor have much conversation with the radiographer, plus the radiological examination is seen by the patient as foreign and causes anxiety. Therefore, the expectations of these patients need to be considered (Ajam, Xing, Siddiqui, Yu, & Nguyen, 2021); (Thrall, 2018).

The results of research by Mario Lino Raposo, et al in 2009 showed that inpatient satisfaction with a score of 60.89 (intermediate level) was most influenced by the patient/doctor relationship, quality of facilities and interaction with administrative staff. Then a descriptive cross sectional survey was conducted by Dr. Kashinath K R, et al. In 2010 it was found that 60% of outpatients were disturbed by the waiting period and patients often felt unsatisfied when their needs were not met (Respati, 2014). Specifically for radiology installation service, on the research conducted by Emmanuel I. Richard et al in 2020, sebanyak 52.2% (n=47) of the respondents from the public hospital were dissatisfied, while 47.8% (n=43) were satisfied. At the private hospital, only 20% (n=10) were dissatisfied, while 80% (n=40) were satisfied with the radiological services received (Richard, Sidi, Lalai, & Zira, 2020). Then for patient satisfaction on various dimensions of radiology installation services, based on research conducted by Kus and Tayubi in 2020, the quality of radiology installation service based on five dimensions is dominated by the agree category, which is 64.66% where the reliability dimension answers agree with service quality of 58.30% (Aryati & Hariyanto, 2020). Furthermore, in a study conducted by Wine, Winni, and Hendra in 2019, patients were satisfied with the high-level category of all dimensions (Meilasari, Suwindere, & Polii, 2019). Thus, patient satisfaction surveys are important and need to be carried out in conjunction with measuring the dimensions of health service quality. This study aims to analyze inpatient and outpatient satisfaction comparison of radiology installation service quality at private hospital.

RESEARCH METHOD

This research is a quantitative research in the form of an analytical survey using a cross sectional approach. Samples were taken by the total sampling method on 30 inpatients and 30 outpatients at the radiology installation of a private hospital in Palembang on July-August 2022.

Data Collection

Data were taken by conducting direct interviews with respondents, each inpatient and outpatient using a predetermined questionnaire. The questionnaire contains 25 questions to assess patient satisfaction. Each component consists of questions that measure five dimensions, namely, Reliability, Responsiveness, Assurance, Empathy, and Tangibles where these five dimensions are a description of health services.

Data Analysis

Statistical data analysis using SPSS. Analysis using SPSS in the form of 1) Independent T Test on the Satisfaction variable after the Shapiro Wilk normality test and homogeneity test were carried out. 2) Mann Whitney U Test on the dimension variables of Reliability, Responsiveness, Assurance, Empathy, and Tangibles after the Kolmogorov Smirnov normality test and homogeneity test.

RESULTS AND DISCUSSIONS

Inpatient and Outpatient Satisfaction of Radiology Installation Service Quality at Private Hospital

Table 1. Inpatient And Outpatient Satisfaction

Group	Satisfaction			
	Satisfied		Unsatisfied	
	n	%	n	%
Inpatient	20	33.33	10	16.67
Outpatient	16	26.67	14	23.33

Table 1 above shows that inpatients and outpatients who feel satisfied are more than those who feel unsatisfied, namely 20 people (33.33%) and 16 people (26.67%).

Various Dimensions of Private Hospital Radiology Installation Service Quality on Inpatient and Outpatient

Table 2. Various Dimensions Of Service Quality On Inpatient And Outpatient

Group	Dimension of Service			
	Good		Not Good	
	n	%	n	%
Reliability				
Inpatient	17	28.33	13	21.67
Outpatient	19	31.67	11	18.33
Responsiveness				
Inpatient	14	23.33	16	26.67
Outpatient	18	30.00	12	20.00
Assurance				
Inpatient	10	16.67	20	33.33
Outpatient	16	26.67	14	23.33
Empathy				
Inpatient	18	30.00	12	20.00
Outpatient	16	26.67	14	23.33
Tangibles				
Inpatient	16	26.67	14	23.33
Outpatient	19	31.67	11	18.33

Table 2 above shows that inpatients perceive reliability, empathy, and tangibles dimensions as good more than not good were 17 people (28.33%), 18 people (30.00%), and 16 people (26.67%) while outpatients consider all reliability, responsiveness, assurance, empathy, and tangibles dimensions both were 19 people (31.67%), 18 people (30.00%), 16 people (26.67%), 16 people (26.67%), and 19 people (31.67%).

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Table 3. Satisfaction Comparison by Independent T Test

Group	Normality Test Shapiro Wilk	Homogeneity Test Levene Statistics	Mean	Sig. value
Inpatient Satisfaction	0.482	0.190	15.00	0.136
Outpatient Satisfaction	0.086		17.60	

Table 3 above shows the inpatient and outpatient satisfaction groups that are normally distributed (Sig. value 0.482 and 0.086) and homogeneous (Sig. value 0.190). There was a difference in the mean of the two groups (15.00 and 17.60). However, there is no significant difference between inpatient and outpatient satisfaction of radiology installation services at private hospitals (Sig. value 0.136).

Various Dimensions Comparison of Private Hospital Radiology Installation Service Quality on Inpatient and Outpatient

Table 4. Various Dimensions Of Service Quality Comparison By Mann Whitney U Test

Group	Normality Test Kolmogorov Smirnov	Homogeneity Test Levene Statistics	Mean Rank	Sig. value
Reliability on Inpatient	0.030	0.003	30.65	0.945
Reliability on Outpatient	0.000		30.35	
Responsiveness on Inpatient	0.000	0.024	28.08	0.267
Responsiveness on Outpatient	0.000		32.92	
Assurance on Inpatient	0.000	0.088	27.22	0.134
Assurance on Outpatient	0.000		33.78	
Empathy on Inpatient	0.000	0.956	29.10	0.516
Empathy on Outpatient	0.000		31.90	
Tangibles on Inpatient	0.000	0.235	27.55	0.163
Tangibles on Outpatient	0.000		33.45	

Table 4 above shows that the reliability, responsiveness, assurance, empathy, and tangibles on inpatient and outpatient groups are not normally distributed (Sig. value 0.000-0.030) but homogeneous in the assurance, empathy, and tangibles groups (Sig. value 0.088, 0.956, and 0.235) and not homogeneous in the reliability and responsiveness groups (Sig. value 0.003 and 0.024). There is a difference in the average level of the two groups. However, there was no significant difference between the five dimensions of radiology installation services at private hospitals on inpatient and outpatient (Sig. value 0.945; 0.267; 0.134; 0.516; and 0.163).

Health services have long been discussed, both in developed and developing countries. The quality of health services is the degree to which the needs of the community or individuals are met for health care in accordance with professional standards with the use of resources in a reasonable, effective, efficient manner within limited capabilities, and is carried out safely and satisfies patients in accordance with norms and ethics. Therefore, health services must always strive for the needs and satisfaction of patients and the community being served simultaneously (Kelmanutu, 2013); (Respati, 2014). Thus, patient satisfaction surveys are important and need to be carried out in conjunction with measuring the dimensions of health service quality.

Radiology services based on Permenkes No. 24 of 2020 known as clinical radiology services are medical services that use all modalities that use radiation sources for diagnosis and/or therapy. This service aims to ensure the safety of health workers and patients as well as the community and

the environment where services are carried out and then realize the standard of Clinical Radiology Serv;)ices and improve the quality of Clinical Radiology Services in Health Service Facilities, whether owned by the Central Government, Regional Government, or private (Menkes, 2020). Radiology installations as part of the health care industry need to understand efforts to maintain quality which include knowledge about the service itself, patient satisfaction, and all the problems associated with it. Services include activities before, during, and after diagnostic procedures and interventions that will affect patient satisfaction. Satisfied patients will comply more with treatment, seek input from medical personnel, keep follow-up appointments, and maintain ongoing relationships with medical personnel (SA, AO, CI, RB, & I, 2021); (Thrall, 2018); (Saikh, 2017).

The Service Quality method, which was coined by Zeithaml and Parasuraman in 1988, is the most widely used method to measure patient satisfaction. This model states that the basic questions that can measure consumer experience with services are included in five dimensions, namely (Respati, 2014); (Idris, 2012); (Alderson, 2000); (Ochonma & Godfrey, 2017): 1. Reliability. The ability to provide services that are presented reliably and accurately. Reliability relates directly to the provision of consistently accurate interpretations of radiologic examinations that relate appropriately to the clinical context in which the examination was ordered, 2. Responsiveness. Willingness to carry out services responsively. Timeliness in radiology practice is reflected in patients' accessibility to procedures and the availability of reports after procedures. 3. Assurance. The knowledge and ability of the service provider to generate trust, free from risk and doubt. Your actions and the actions of your employees who interact with patients, with other physicians, and with the public represent the quality of your business. 4. Empathy. Willingness to understand patient needs. Patients want and need to be treated as individuals by other individuals, rather than as items by an impersonal organization. 5. Tangibles. Complete personnel, pleasant physical appearance, ready-to-use equipment. in radiology relates to the quality of the imaging equipment and the images themselves.

Many studies exist regarding patient satisfaction. One of the studies was conducted at the Southeast Maluku District Hospital where most of the respondents said that they were quite good at timeliness (98.7%), information (85.0%), and human relations (95.0%) (Kelmanutu, 2013). Research on the quality of radiology installation services at hospital X conducted by Kus and Tayubi in 2020 showed a significant relationship between service quality and patient satisfaction with the percentage of patients answering satisfied at 69.98% (Aryati & Hariyanto, 2020). Subsequent research conducted by Wine, Winni, and Hendra in 2019 regarding satisfaction with panoramic radiography services at the radiology installation of the Maranatha Dental and Oral Hospital showed patients who were satisfied with the high category of 88.2% (Meilasari, Suwindere, & Polii, 2019). Kemudian pada penelitian yang dilakukan oleh Efanga SA et al tahun 2021, The Ultrasound scan (P 0.046) and Conventional Radiography (P 0.048) clients were satisfied with the cleanliness of the toilets in the waiting areas of the corresponding units. The level of satisfaction with patient waiting time was significant in the Ultrasound scan unit (P 0.027) and Conventional Radiography unit (P 0.044). The participants in the Conventional Radiography unit were significantly satisfied with the interesting items that are present in the patient waiting area (P 0.016) while the patient satisfaction with the cost for the procedures in Ultrasound scan unit was significant (P 0.045) (SA, AO, CI, RB, & I, 2021).

A lot of research has been done on the dimensions of service and patient satisfaction. One of them was carried out at the Semarang City Health Center which showed that there was a relationship between the quality of health services with dimensions of reliability (p value 0.008), assurance (p value 0.043), tangible (p value 0.005), empathy (p value 0.005), and responsiveness (p value 0.001) with patient satisfaction (Respati, 2014). Subsequent research conducted at Pariaman Hospital showed that there was a significant relationship between the reliability (p value 0.016) and responsiveness (p value 0.017) of nurses with the level of patient satisfaction in the inpatient

room of the hospital (Idris, 2012). Subsequent research on the level of satisfaction of inpatients with the service quality of the Radiology Installation of Arifin Achmad Hospital, Riau Province, shows the indicators of service quality dimensions: reliability (57.1%), responsiveness (64.2%), empathy (62.3%), assurance (59.9%), and tangibles (59.2%) were satisfied (Nurullita, 2020). Furthermore, research conducted by Rama and Kanagluru in 2011 showed that in radiology installation services at a hospital, male patients were most satisfied with timely issues of reports, while female patients were most satisfied with clarification of queries (Mohanl & Kumar, 2011).

CONCLUSION

Inpatient and outpatient satisfaction of radiology installation services at private hospitals is not much different. More people are satisfied than those who are not. The quality of various dimensions of service is mostly assessed by both inpatients and outpatients even though these two groups give good ratings, especially on reliability, empathy, and tangibles dimensions. It can be concluded that there is no significant difference between inpatient and outpatient satisfaction. Likewise, there is no significant difference between the quality assessments on various dimensions of service between inpatients and outpatients. As a suggestion, radiology installation services in private hospitals must improve the quality of various service dimensions so that in the end, patient satisfaction with these services also increases, both inpatients and outpatients.

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