Service Quality Factors that Influence Patient Satisfaction at Buleleng Regional Hospital

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ABSTRACT
The quality of service in the Radiology Department of Buleleng Regional Hospital is determined by several service quality factors: tangible aspects, reliability, responsiveness, assurance, and empathy. This research aimed to observe the service quality factors that affect patient satisfaction and determine which factor is the most dominant and influential in the Radiology Department of Buleleng Regional Hospital. The research uses a quantitative system with a survey approach conducted in April 2024. The study population includes all outpatient patients receiving radiology services at Buleleng Regional Hospital, with a sample size of 30 cooperative outpatients or their families. The collected data were analyzed using SPSS, including validity tests, reliability tests, univariate analysis, and bivariate analysis using Spearman's correlation test. The results show that patient satisfaction in the Radiology Department of Buleleng Regional Hospital is determined by service quality factors: tangible aspects, reliability, responsiveness, assurance, and empathy. The most dominant factor affecting patient satisfaction is assurance, as indicated by a significant value (Sig. (2-tailed)) of 0.000. Since this value is less than 0.05, assurance has the most notable impact among the service quality variables influencing patient satisfaction.

Keywords: Patient Satisfaction, Service Quality, Examination, Radiology Installation

ABSTRAK
Kualitas pelayanan di Bagian Radiologi RSUD Kabupaten Buleleng ditentukan oleh beberapa faktor kualitas pelayanan yaitu: aspek nyata, keandalan, daya tanggap, jaminan, dan empati. Penelitian ini bertujuan untuk mengamati faktor-faktor kualitas pelayanan yang mempengaruhi kepuasan pasien dan mengetahui faktor mana yang paling dominan dan berpengaruh di Bagian Radiologi RSUD Kabupaten Buleleng. Penelitian ini menggunakan sistem kuantitatif dengan pendekatan survei yang dilakukan pada bulan April 2024. Populasi penelitian meliputi seluruh pasien rawat jalan yang menerima pelayanan radiologi di RSUD Kabupaten Buleleng, dengan jumlah sampel sebanyak 30 orang pasien rawat jalan kooperatif atau keluarganya. Data yang terkumpul dianalisis dengan menggunakan SPSS, meliputi uji validitas, uji reliabilitas, analisis univariat, dan analisis bivariat dengan menggunakan uji korelasi Spearman. Hasil penelitian menunjukkan bahwa kepuasan pasien di Bagian Radiologi RSUD Kabupaten Buleleng ditentukan oleh faktor kualitas pelayanan: aspek nyata, keandalan, daya tanggap, jaminan, dan empati. Faktor yang paling dominan mempengaruhi kepuasan pasien adalah jaminan yang ditunjukkan dengan nilai signifikansi (Sig. (2-tailed)) sebesar 0,000. Karena nilai ini kurang dari 0,05, jaminan
mempunyai dampak yang paling menonjol di antara variabel kualitas layanan yang mempengaruhi kepuasan pasien

Kata kunci: Kepuasan Pasien, Kualitas Pelayanan, Pemeriksaan, Instalasi Radiologi

INTRODUCTION

Hospital is a health service institution that provides comprehensive individual health services that provide inpatient, outpatient, and emergency services (Giannouchos et al., 2021 and Rifla & sni Syam, 2024). As a health service, hospitals have major problems regarding services. Therefore, hospitals are required to always maintain patient trust by improving the quality of their services. One of the aims of regulating hospital operations is to improve the quality and maintain hospital service standards (Fatima et al., 2018; Lee, 2019 and DCunha et al., 2021). Hospitals must create and manage a system to create patient satisfaction and acquire more patients (Al-Neyadi et al., 2018). Satisfaction is a person's feeling of pleasure that comes from comparing the pleasure of an activity and a product with their expectations. Thus, patient satisfaction in the hospital depends on the service provided by the hospital. However, the services provided are still not in accordance with what the patient wants and patient satisfaction is still not in accordance with the standards (Hettiarachchi & Lakmal, 2018; Haji et al., 2021 and Widagdo & Roz, 2021)

The standard for patient satisfaction in health services is set nationally by the Ministry of Health (Kwateng et al., 2019). According to the Regulation of the Ministry of Health of the Republic of Indonesia in 2016 concerning the Minimum Service Standards for patient satisfaction, it is above 90%. If a health service is found with a patient satisfaction level below 90%, then the health service provided is considered not to meet the minimum standards (Akbar et al., 2020; Ratnawati et al., 2021; Wahyuningsih et al., 2023 and Ngatindriatun et al., 2024). Realizing patient satisfaction with health services certainly refers to various factors. Factors that influence patient satisfaction include the dimensions of satisfaction itself, including physical evidence, reliability, responsiveness, assurance, and empathy (Yunningsih, 2022). Physical evidence is the appearance of physical facilities, equipment, personnel, and means of communication. Patients will feel satisfied with the services provided when the physical facilities available at the health facility can meet their expectations (Wibisono et al., 2022). When a health worker provides services, treatment, and care quickly, accurately, and reliably, services are carried out according to schedule, and service procedures are not complicated, of course, it will make patients feel that they are getting optimal service so that later it will create a feeling of satisfaction in the patient. In addition, another factor that influences satisfaction is responsiveness (Murray et al., 2019).

A health worker must be responsive in resolving patient complaints, clear and easy-to-understand information, and actions taken quickly and appropriately when the patient needs it because that way the patient will feel satisfied with the services provided. Assurance, this patient satisfaction will arise because patients believe and are sure that health workers provide optimal services according to the knowledge and abilities they have. Other factors that can influence satisfaction are empathy (Chege et al., 2019). Ease of establishing good communication relationships, personal attention, and understanding the needs of customers. Patients will feel satisfied when health workers can provide special attention to each patient and without distinguishing their status (Abidova et al., 2020). Radiology services are medical services that use all modalities that use ionizing and non-ionizing radiation sources for diagnosis and/or therapy with imaging guidance (Tjuanda, 2021). Buleleng Regency Hospital is a type B hospital located in Singaraja City. It has a vision of becoming the main choice hospital for the community with quality, professional, and education-based services. The motto of Buleleng District Hospital is PRISMA. Caring which is a service that is attentive and understanding to patients. Responsive means a responsive service; integrity means an honest and open attitude and behaviour
with high dedication. Touch, namely serving with a touch of affection with the principle of Tat Twam Asi. Easy, which is a service that is easy to get and not complicated; and Safe, which is a comprehensive service that applies the principles of patient safety. The motto mentioned above shows how Buleleng District Hospital prioritizes the quality of service to patient satisfaction. Based on the author's experience when carrying out Field Work Practice at Buleleng District Hospital, the author observed that there were still a few complaints reported by visitors or through direct patients who might still not be able to satisfy certain patients and visitors. Therefore, based on the background above, the author is interested in studying further in the form of a scientific paper entitled Factors of Service Quality that Influence Patient Satisfaction at the Radiology Installation of Buleleng District Hospital.

METHOD
This type of research uses a quantitative method with a survey approach. The data collection location for this Scientific Paper Proposal was the Buleleng Regency Hospital. Data collection was carried out in March 2024. The author directly observed the examination service process at the Radiology Installation of the Buleleng Regency Hospital and collected data by accidental sampling, which is a sampling technique that does not provide equal opportunities or chances for each element or member of the population to be selected as a sample. The author gave questionnaires to 30 cooperative outpatients or patient families who would be the research sample. The purpose of this study was to determine the service quality factors that influence patient satisfaction and what service quality factors are the most dominant and influential on patient satisfaction at the Radiology Installation of the Buleleng Regency Hospital. To analyze the data, the author used the SPSS program with validity tests, reliability tests, univariate analysis, and bivariate analysis using Spearman's correlation test. In this study, a survey approach was used to obtain relevant data regarding patient satisfaction with the services provided at the Radiology Installation. The data collection process carried out in March 2024 allowed the author to obtain an accurate and up-to-date picture of the quality of service. The accidental sampling technique used allowed the author to select samples based on the availability and willingness of respondents, which helped in obtaining varied data. The use of questionnaires as a data collection tool made it easy to obtain information directly from patients and their families. Data analysis using the SPSS program allowed the author to perform various statistical tests as needed, such as validity and reliability tests to ensure that the instruments used in this study were valid and consistent. Univariate analysis helped in understanding the distribution of data, while bivariate analysis with Spearman's correlation test was used to determine the relationship between various factors of service quality and patient satisfaction levels. Thus, this study is expected to provide comprehensive insight into the factors that influence patient satisfaction at the Radiology Installation of Buleleng Regency Hospital.

RESULT
Data was obtained by distributing questionnaires filled out directly by patients or represented by the patients' families who had received services at the Radiology Installation of Buleleng District Hospital. The questionnaires were based on a sample of 30 patients who had received services at the Radiology Installation of Buleleng District Hospital from April 10, 2024, to April 18, 2024. So, to get a clear picture of the research's results, the general description of the respondents can be seen as follows.
This diagram depicts the frequency distribution of respondents by age group. This distribution is a visual representation of data that shows the number of respondents in various age categories, which is useful for understanding the demographics of the surveyed population (DeSimone & Harms, 2018). Based on the survey results, the 18-24 age groups dominate with 47% of the total respondents. This shows that almost half of the surveyed populations are young individuals in that age range. The next age group, 25-34, comprises 13% of the respondents. Although the proportion is smaller than the 18-24 age groups, this figure still shows significant participation from young adult respondents. The 35-44 age groups have 10% of the total respondents, which indicates less participation from the middle-adult age group. Lastly, the 45-55 age group accounts for 30% of the respondent population. Although less than the 18-24 age group, this group still has a significant representation. This distribution provides important insights into the age composition of survey respondents, which can be indicative of different characteristics or preferences based on age. This chart helps in understanding how different age groups participated in the survey. This information can be used for further analysis of how age factors affect the survey results or the views expressed by respondents. For example, certain preferences or opinions may be more prevalent in certain age groups, which can affect the interpretation of the survey data as a whole.

A frequency distribution diagram of respondents by gender is a visual representation used to display data regarding the number or percentage of respondents divided by gender category. In the study referred to by Van Garderen et al. (2018), this type of diagram makes it easier to understand how gender is distributed in the sample being studied. In the example given, the diagram shows that 50% of the total respondents are male and the other 50% are female. This means that in the sample being studied, there is a balance between the number of male and female respondents, each contributing half of the total sample. Frequency distribution diagrams like this are usually made in the form of bar graphs, pie charts, or other types of graphs that allow easy visual comparison between the existing categories. The use of frequency distribution diagrams by gender has several benefits. First, this diagram provides a clear and concise picture of the gender composition.
of a sample, making it easier for researchers and readers to quickly understand demographic data. Second, this diagram can help identify gender bias in data collection, especially if there is a significant imbalance between the number of male and female respondents. In addition, this diagram is also useful in planning further research, as it can indicate whether special efforts are needed to achieve a more balanced gender representation. Frequency distribution diagrams of respondents by gender are effective tools in demographic data analysis, helping researchers and readers to gain a better understanding of the gender distribution in the sample studied.

![Diagram 3](image1)

*Diagram 3. Frequency distribution of respondents according to last education*

The frequency distribution of respondents based on highest education provides an overview of the highest level of education achieved by respondents in a population or survey sample. This data is important for understanding the educational background of the surveyed group. In this case, the diagram shows that 13% of the total respondents have a high school education, while the other 87% have completed college. Visualizations such as bar charts or pie charts make it easier to interpret this data, allowing us to quickly see the proportions of each education group.

![Diagram 4](image2)

*Diagram 4. Frequency distribution of respondents according to their occupation*

The frequency distribution diagram of respondents by occupation is an important visual tool in presenting survey or study data. This diagram illustrates how respondents in the study are distributed according to the type of occupation they have. Based on information from Zhang et al. (2018), the diagram shows several categories of occupations with certain percentages of the total respondents. For example, 43% of respondents are unemployed, which is the largest group in the survey. In addition, there are 17% of respondents who work as self-employed, 7% work as civil servants (PNS), members of the TNI, or POLRI, and 3% of respondents are farmers. The remaining 30% of respondents work in other fields that are not covered in the categories mentioned earlier. The information presented in this diagram is very useful for various purposes. First, it allows researchers to get an overview of the respondents' occupational background. In addition, this diagram can help in further analysis, such as understanding the relationship between
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occupation and other variables in the study, such as income or education level. In addition, this frequency distribution diagram also makes it easier to present information to a wider audience, be it fellow researchers, policy makers, or the general public, so that they can easily understand and compare respondent job data. Thus, this diagram not only serves as an effective communication tool, but also as a basis for deeper data analysis and interpretation in the context of social or economic research.

Diagram 5. Frequency distribution of tangible service quality dimension

The frequency distribution of tangible service quality dimensions is a method to describe respondents' perceptions or assessments of the tangible aspects of a service. These tangible aspects usually include elements such as physical facilities, equipment used, staff appearance, and communication materials delivered to customers. In other words, this frequency distribution helps us understand how the physical and visual experiences experienced by customers in a service are distributed among them. According to Yeong et al. (2022), this distribution provides insight into how well the tangible aspects of the service are perceived by respondents. For example, the data in the form of a diagram shows that of the total respondents, 33% rated the service quality as 'good', while the other 67% rated it as 'very good'. This means that the majority of respondents had a positive experience with the tangible aspects of the service, such as clean and modern facilities, adequate equipment, professional appearance of staff, and informative and clear communication materials. This frequency distribution analysis is very important for service providers to evaluate and improve their service quality. By understanding how customers rate the tangible aspects of the service, providers can identify areas that need improvement or that can be further strengthened. In addition, it also helps in designing more effective communication and marketing strategies, as they can customize promotional materials according to customer preferences and perceptions. Overall, the frequency distribution of tangible service quality dimensions is an important tool in service quality management, which helps organizations understand and improve customer experience.

Diagram 6. Frequency distribution of reliability service quality dimensions
Frequency distribution is a method of presenting data to make it easier to understand. In the context of service quality, especially reliability, frequency distribution is used to illustrate how reliability ratings are spread among respondents. For example, in a study by Brysbaert et al. (2018), frequency distribution is used to show how respondents rate the reliability of a service. This frequency distribution diagram allows us to clearly see how respondents rate the reliability of the service. Based on the data obtained, 33% of respondents rated the service reliability as "good", while the other 67% rated the service reliability as "very good". By using frequency distribution, we can get an overview of how service quality is assessed by consumers, as well as identify areas that may need improvement or further attention. This is a useful tool in data analysis, as it helps simplify and summarize information, making it easier to make data-driven decisions.

Diagram 7. Frequency distribution of responsiveness service quality dimensions

The frequency distribution diagram of the responsiveness service quality dimension is used to assess how quickly and responsively a service responds to customer needs. Based on research by Sugiarto & Octaviana (2021), this diagram provides an overview of customer perceptions of the speed of service provided. In the results shown by the diagram, as many as 27% of the total respondents rated the responsiveness of the service they received as "good," while the other 73% felt the service was "very good." Through this diagram, service providers can identify patterns or trends in their service responses and identify areas that need improvement. For example, if the percentage of those who rated "good" or "very good" decreases, it could be an indication that there is a problem in the response system or that there needs to be an increase in staff training to improve service quality. Thus, this frequency distribution diagram not only provides insight into current service quality but also serves as an important tool for planning and improving future services.

Diagram 8. Frequency distribution of assurance service quality dimensions

The frequency distribution of the “assurance” dimension in service quality refers to how data relating to customers’ perceptions or assessments of the “assurance” aspect of a
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The service provided by an organization is distributed in a data set. “Assurance” in the context of service quality includes elements such as the knowledge and courtesy of employees and their ability to instill trust and confidence in customers. By analyzing this frequency distribution, organizations can understand how customers rate the “assurance” aspect and identify areas that need more attention or improvement. Frequency distribution diagrams are used to visually depict these customer perceptions or assessments. In a study conducted by Idayati et al. (2020), the frequency distribution diagram shows that 20% of the total respondents rated the “assurance” aspect as “good,” while the other 80% rated it as “very good.” This indicates that the majority of customers have a very positive perception of the knowledge, courtesy, and ability of employees to instill trust. This data is very important for organizations because it allows them to see the overall distribution of customer assessments, which can help in the decision-making process related to improving service quality. If there are areas where customer ratings are not so positive, organizations can take the necessary steps to improve those aspects, with the goal of improving overall customer experience and satisfaction.

![Diagram 9. Frequency distribution of empathy service quality dimensions](image)

Frequency distribution diagram for empathy service quality dimension is a tool used to analyze data related to customer perceptions of empathy aspects in services. This diagram depicts how often certain values appear in customer or respondent responses, thus helping to understand their perceptions of empathy in services. According to Bungatang & Reynel (2021), this frequency distribution diagram is very useful for identifying areas in services that need improvement or enhancement. By visualizing the data, this diagram allows service providers to see patterns and trends in customer feedback. For example, in the given example, the diagram shows that 23% of the total respondents rated the empathy quality of service as “good,” while the other 77% gave it a “very good” rating. This information is important for service providers because it shows that the majority of customers have a positive view of empathy in the services provided. However, this data can also indicate potential areas for improvement. For example, although the majority rated it “very good,” there were 23% who only rated it “good,” which may indicate that there is still room for improvement. Thus, frequency distribution diagrams help in a deeper understanding of customer perceptions and support better decision making to improve service quality, especially in the empathy aspect.
Frequency distribution diagrams for the patient satisfaction service quality dimension are useful tools in surveys or research to assess how patients perceive various aspects of service quality. According to Sholeh & Chalidyanto (2021), this diagram shows how often patients report their level of satisfaction with the quality of service they receive. In the example given, the diagram shows that the majority of patients are very satisfied with the politeness of the staff, which is reflected in the high frequency in the assessment. This indicates that the politeness of the staff is an aspect that is highly valued and received positively by many patients. Conversely, if the aspect of the cleanliness of the facility shows a low frequency in the assessment, this could indicate problems or deficiencies in that area. Frequency distribution diagrams make it easy to identify areas that need improvement as well as areas that are already satisfying patients. In this example, 23% of respondents reported that they were satisfied with the service, while the other 77% were very satisfied. With this data, management can prioritize improvement efforts in areas that have low frequency ratings and strengthen aspects that are already highly rated. This is an important step in the ongoing effort to improve overall service quality and patient satisfaction.

Statistical Results show Data Validity Test Based on the decision criteria attachment sig. (2-tailed) <0.05 Valid, sig. (2-tailed)> 0.05 invalid. From the test above, out of 30 questions, namely 25 questions about service quality and 5 questions about patient satisfaction, a validity test was carried out and 30 items with values (2-tailed) <0.05 were obtained, so it was concluded that the 30 questions were valid.

<table>
<thead>
<tr>
<th>Table 1. Data Reliability Test</th>
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<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>Service quality</td>
</tr>
<tr>
<td>Patient satisfaction</td>
</tr>
</tbody>
</table>

If the Cronbach Alpha reliability coefficient value is >0.6, then the instrument is declared reliable. From the test above, the Cronbach Alpha reliability coefficient value for Service Quality is = 0.918>0.6 and Patient Satisfaction is = 0.719>0.6. The statistical results show the spearman test after bivariate analysis using the spearman test for service quality that affects patient satisfaction, the ρ value is 0.001, because the ρ value <0.05 then Ho is rejected and Ha is accepted. Based on the results above, there is an Influence of Radiology Service Quality on Patient Satisfaction in Examination at the Radiology Installation of Buleleng Regency Hospital.
Table 2. Bivariate Analysis of Spearman Correlation Test

<table>
<thead>
<tr>
<th>Patient Satisfaction</th>
<th>f</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tangible</td>
<td>30</td>
<td>0.064</td>
</tr>
<tr>
<td>Reliability</td>
<td>30</td>
<td>0.006</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>30</td>
<td>0.007</td>
</tr>
<tr>
<td>Assurance</td>
<td>30</td>
<td>0.000</td>
</tr>
<tr>
<td>Empathy</td>
<td>30</td>
<td>0.029</td>
</tr>
</tbody>
</table>

The results are a Service Quality Factor that most dominantly influences Patient Satisfaction in Examination at the Radiology Installation of Buleleng District Hospital, namely the assurance variable (guarantee) has a significant value or Sig. (2-tailed) of 0.000 which is the lowest significant value among the other variables.

CONCLUSION

The results of the study on Service Quality Factors Affecting Patient Satisfaction at the Radiology Department of Buleleng District Hospital indicate that patient satisfaction with examinations at the radiology department is influenced by service quality factors, namely tangibles, reliability, responsiveness, assurance, and empathy. Among these factors, assurance is the most dominant factor influencing patient satisfaction. Although patient satisfaction with examinations at the Radiology Department of Buleleng District Hospital is generally good, there is still a need for improvements in service quality. The goal is to elevate patients' satisfaction levels from merely being satisfied to becoming very satisfied. Enhancing service quality may involve various aspects, such as improving staff skills and competencies, providing better facilities, ensuring effective communication with patients, and offering greater attention and empathy toward patients' needs. By making these improvements, Buleleng District Hospital aims to provide a superior service experience for patients, ultimately increasing patient satisfaction and loyalty.
REFERENCES


