

## **The Effect of Service Quality, Infrastructure, and Hospital Image on Patient Satisfaction in Pharmaceutical Services at the Outpatient Pharmacy Depot of RSUD Dr. Harjono Ponorogo**

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### **Abstract**

This study aims to analyze the effect of *service quality*, infrastructure, and hospital image on patient satisfaction in pharmaceutical services at the outpatient pharmacy depot of RSUD Dr. Harjono Ponorogo. The research method used is quantitative correlational research with a descriptive quantitative approach. The population consists of 200 patients who purchased medications at the Outpatient Pharmacy Depot of RSUD Dr. Harjono Ponorogo in May 2025, employing a total sampling technique. Data collection was conducted using questionnaires with a Likert scale. Data analysis techniques included validity and reliability tests, classical assumption tests, and multiple linear regression analysis. The results showed that *service quality* has a positive and significant effect on patient satisfaction ( $t = 7.230$ ,  $\text{sig} = 0.000$ ), infrastructure has a positive and significant effect on patient satisfaction ( $t = 6.846$ ,  $\text{sig} = 0.000$ ), and hospital image has a positive and significant effect on patient satisfaction ( $t = 9.312$ ,  $\text{sig} = 0.000$ ). Simultaneously, *service quality*, infrastructure, and hospital image have a significant effect on patient satisfaction ( $F = 187.729$ ,  $\text{sig} = 0.000$ ). The coefficient of determination (Adjusted  $R^2$ ) is 0.738, indicating that 73.8% of the variation in patient satisfaction is explained by the three independent variables. The study concludes that improving *service quality*, infrastructure, and hospital image is crucial for enhancing patient satisfaction in pharmaceutical services.

**Keywords:** Service Quality; Infrastructure; Hospital Image; Patient Satisfaction; Pharmaceutical Services

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### **INTRODUCTION**

Globalization has created competition in all sectors, including services. One of the healthcare service providers that is greatly needed by the community in efforts to improve health status, especially through curative and rehabilitative approaches, is hospitals (Binh Quoc Nguyen & Cuc Thi Thu Nguyen, 2022; Do Xuan Thang et al. 2025; Dudung Juhana et al. 2015; Mercy Chisom Agu et al. 2025; National study, Ethiopia 2021; Muslim Amin & Siti Zahora Nasharuddin, 2013; Yehualaw et al. 2023). The increasing number of hospitals and growing competition requires every hospital to provide *service quality* and excellent services, paying attention to patient safety and comfort aspects (Situngkir, Handoko & Agustina, 2024).

Law Number 17 of 2023 states that hospitals are obligated to provide safe, quality, non-discriminatory, and effective healthcare services by prioritizing patient interests in accordance with hospital service standards.

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Hospitals, as primary healthcare facilities, are not only required to provide quality medical services but also pharmaceutical services that can comprehensively support the patient healing process.

Pharmaceutical services are direct and responsible services to patients related to pharmaceutical preparations, medical devices, and disposable medical materials with the intention of achieving definite results to improve patient quality of life (Permenkes No. 3 of 2021). These services also involve integrated activities to identify, prevent, and solve drug-related problems and health-related issues.

RSUD Dr. Harjono Ponorogo is one of the referral hospitals for healthcare services from both government and private sectors that provides services to the community. It has full accreditation with experienced healthcare personnel, complete facilities, and delivers excellent service to patients. As a public service in the healthcare sector, RSUD Dr. Harjono must focus on patient satisfaction and be responsive to every development that occurs to realize the organization's goal of providing the best healthcare services to patients.

Patient satisfaction is a crucial indicator of service success provided by hospitals. Several empirical studies have concluded that *service quality* affects patient satisfaction, including research by Dewi, Suryawati & Arso (2023), which found that *service quality* has a significant effect on patient satisfaction. Research conducted by Setyorini, Kusumastuti & Wirawan (2025) also concluded that patient satisfaction is influenced by *service quality*.

Another important factor for achieving patient satisfaction is infrastructure. The condition of inadequate infrastructure also becomes a factor that affects patient perceptions of pharmaceutical services. Research by Kristiawan, Koton & Kadir (2023) concluded that patient satisfaction is influenced by infrastructure.

In addition to providing quality services and complete, comfortable infrastructure, the outpatient pharmacy depot of RSUD Dr. Harjono Ponorogo also needs to maintain a good image in the community. Image is a public perception of a company related to architecture, business, product variety, and quality communicated by its employees to the company's clients (Kotler, 2021).

Based on information from several patients encountered by researchers during preliminary surveys through interviews, there were 3 patients who complained about long waiting times, 4 people mentioned unfriendly or unprofessional employee attitudes, 2 people mentioned uncomfortable waiting rooms due to insufficient air conditioning and limited parking facilities, 3 people complained about errors in patient data recording or schedule management, and 2 people complained about the unavailability of needed medications.

*Service quality* is an effort to meet the level of consumer needs and expectations and timeliness in delivery to balance reality and consumer desires

(Lupiyoadi, 2018). According to Tjiptono (2019), *service quality* is a dynamic condition closely related to products, services, human resources, processes, and environments that can at least meet or even exceed the required service standards.

*Service quality* indicators according to Lupiyoadi (2018) include five dimensions: Tangibles (physical facilities, equipment, employees, and communication facilities), Reliability (ability to provide promised services accurately and satisfactorily), Responsiveness (willingness to help customers and provide prompt service), Assurance (knowledge and courtesy of employees and their ability to inspire trust and confidence), and Empathy (caring, individualized attention provided to customers).

Infrastructure refers to facilities that support activities indirectly. According to Permenkes No. 30 of 2022, pharmaceutical infrastructure indicators include: reception room for prescriptions, prescription service and compounding room, pharmaceutical and medical device delivery room, counseling room, pharmaceutical and medical device storage room, waiting area, and waste disposal area. The purpose of infrastructure according to Junaidi in Solihah, Sundoro & Purnomo (2022) is to accelerate work processes to save time, increase productivity, ensure better quality work results, facilitate work, and create comfort for stakeholders.

Image is a public perception of a company related to architecture, business, product variety, and quality communicated by its employees to the company's clients (Kotler, 2021). Image indicators according to Kotler & Keller (2018) include: Personality (overall characteristics of the company understood as a trustworthy and socially responsible company), Reputation (activities carried out by the company and trusted by consumers based on experience), Value (values contained in a company with corporate culture), and Corporate Identity (all components that facilitate recognition of the company by targets).

Patient satisfaction is a feeling of happiness or disappointment that arises after comparing perceived performance with expectations. According to Swasta & Irawan (2019), patient satisfaction indicators include: patients feel satisfied, patients will not switch to other providers, patients will recommend to others, and fulfillment of patient expectations.

Previous studies highlight the importance of *service quality* in pharmaceutical services but leave several critical gaps. The first study by Juwita, Desri, and Permatasari (2023) concluded that most patients were satisfied with pharmaceutical services, particularly in terms of communication and administrative explanations. However, this study only focused on limited *service quality* dimensions and did not examine the role of physical infrastructure or hospital image in shaping patient satisfaction. The second study by Astuti et al. (2023) revealed that long waiting times negatively impacted patient satisfaction, but the research was primarily descriptive and

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did not analyze the influence of broader variables such as *service quality* or hospital reputation.

This study aims to analyze the effect of *service quality*, infrastructure, and hospital image on patient satisfaction in pharmaceutical services at the outpatient pharmacy depot of RSUD Dr. Harjono Ponorogo. The findings are expected to provide comprehensive insights for improving pharmaceutical service operations, enhancing infrastructure and staff professionalism, and strengthening the hospital's public image, which in turn will increase patient trust and satisfaction.

## RESEARCH METHOD

This research used quantitative correlational research methods. The population consists of 200 patients who purchased medications at the Outpatient Pharmacy Depot of RSUD Dr. Harjono Ponorogo in May 2025. The sampling technique used is total sampling, where all population members are used as research samples. Data collection was conducted using questionnaires with a Likert scale (1 = Strongly Disagree, 2 = Disagree, 3 = Somewhat Agree, 4 = Agree, 5 = Strongly Agree). Data analysis techniques included validity and reliability tests, classical assumption tests, and multiple linear regression analysis using SPSS.

## RESULTS AND DISCUSSION

### Respondent Characteristics

The majority of respondents were female (63.5%), aged 31-50 years (55.5%), had high school education (50.5%), and worked as farmers (51.0%).

### Instrument Testing

#### *Validity Test Results*

All questionnaire items for service quality, infrastructure, hospital image, and patient satisfaction variables showed r-calculated values greater than r-table (0.220), indicating that all instruments are valid.

#### *Reliability Test Results*

All research variables showed Cronbach's Alpha values greater than 0.6 (service quality = 0.937, infrastructure = 0.902, hospital image = 0.626, patient satisfaction = 0.728), indicating that all instruments are reliable.

#### *Descriptive Analysis*

Respondents' answers to the service quality questionnaire showed an average score of 4.09 (agree category), infrastructure questionnaire showed an average score of 4.46 (agree category), hospital image questionnaire showed an average score of 4.37 (agree category), and patient satisfaction questionnaire showed an average score of 4.38 (agree category).

### ***Classical Assumption Tests***

Normality Test: Kolmogorov-Smirnov test results showed significance values  $> 0.05$  for all variables, indicating normal data distribution.

Multicollinearity Test: Tolerance values  $> 0.1$  and VIF values  $< 10$  for all variables, indicating no multicollinearity.

Heteroscedasticity Test: Significance values  $> 0.05$  for all variables, indicating no heteroscedasticity symptoms.

### ***Multiple Linear Regression Analysis***

The regression equation obtained is:  $Y = 1.632 + 0.158X_1 + 0.152X_2 + 0.455X_3$

Where:

Y = Patient Satisfaction

$X_1$  = Service Quality

$X_2$  = Infrastructure

$X_3$  = Hospital Image

### ***Hypothesis Testing***

#### ***Partial Test (t-test)***

1. Service quality has a positive and significant effect on patient satisfaction ( $t = 7.230$ ,  $\text{sig} = 0.000 < 0.05$ )
2. Infrastructure has a positive and significant effect on patient satisfaction ( $t = 6.846$ ,  $\text{sig} = 0.000 < 0.05$ )
3. Hospital image has a positive and significant effect on patient satisfaction ( $t = 9.312$ ,  $\text{sig} = 0.000 < 0.05$ )

#### ***Simultaneous Test (F-test)***

Service quality, infrastructure, and hospital image simultaneously have a significant effect on patient satisfaction ( $F = 187.729$ ,  $\text{sig} = 0.000 < 0.05$ ).

### ***Coefficient of Determination***

The Adjusted  $R^2$  value of 0.738 indicates that 73.8% of patient satisfaction variation is explained by service quality, infrastructure, and hospital image, while the remaining 26.2% is influenced by other factors outside the model.

### ***Discussion***

#### ***Effect of Service Quality on Patient Satisfaction***

The results show that service quality has a positive and significant effect on patient satisfaction. This means that higher service quality, as reflected through the five dimensions of tangibles, reliability, responsiveness, assurance, and empathy, will increase patient satisfaction levels. Tangibles such as modern equipment, well-maintained facilities, and professional appearance of staff create a strong first impression for patients. Similarly, reliability and

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responsiveness ensure that patients receive accurate and timely services, while assurance and empathy help build trust and personalized care. These factors work together to provide a holistic and positive experience for patients during pharmaceutical services. These findings are consistent with research by Situngkir, Handoko & Agustina (2024) and Dewi, Suryawati & Arso (2023), which also highlighted the critical role of service quality dimensions in influencing patient satisfaction.

Furthermore, the positive relationship between service quality and patient satisfaction underscores the importance of continuous staff training and service evaluation. Hospitals need to prioritize human resource development, focusing on communication, technical skills, and empathy to better meet patient expectations. Regular assessment of service quality through patient feedback can help identify gaps and areas for improvement. By ensuring that service quality consistently meets or exceeds expectations, hospitals can build stronger relationships with patients, enhance patient loyalty, and improve their overall reputation.

### ***Effect of Infrastructure on Patient Satisfaction***

Infrastructure has a positive and significant effect on patient satisfaction. Complete and well-maintained facilities, such as prescription reception rooms, compounding rooms, delivery rooms, counseling rooms, storage areas, comfortable waiting areas, and proper waste disposal, contribute directly to a better patient experience. Patients tend to feel more valued and comfortable when the hospital provides adequate space, clear navigation, and functional equipment. These results align with research by Kristiawan, Koton & Kadir (2023), which emphasizes that infrastructure quality is a critical component of patient-centered care. Adequate infrastructure also ensures the efficiency of pharmaceutical services, reducing waiting times and minimizing errors during the prescription process.

In addition, infrastructure plays a role in shaping patients' perception of service reliability and professionalism. Poorly maintained or insufficient facilities may give the impression of low-quality care, regardless of the competence of healthcare professionals. Therefore, regular maintenance, upgrades, and strategic investments in infrastructure are crucial. Hospitals should also focus on enhancing the comfort of waiting rooms, parking areas, and accessibility for all patients. This comprehensive approach to infrastructure management will not only improve patient satisfaction but also strengthen the hospital's competitive advantage in the healthcare sector.

### ***Effect of Hospital Image on Patient Satisfaction***

Hospital image has a positive and significant effect on patient satisfaction. A positive hospital image builds trust and enhances patients' perceptions of the quality of care they receive. When a hospital is viewed as reputable, professional, and socially responsible, patients are more likely to

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feel comfortable and confident in the services provided. Hospitals with strong reputations are better able to meet or exceed patient expectations, contributing to higher levels of satisfaction. These findings are consistent with research by Situngkir, Handoko & Agustina (2024) and Eftitah et al. (2023), which also highlight the influence of institutional image on patient perceptions and loyalty.

Moreover, hospital image is shaped by various factors, including the behavior of staff, the quality of communication, community engagement, and the hospital's physical environment. A positive image can also be reinforced through effective branding, public relations, and consistent service excellence. Hospitals that invest in their image not only retain existing patients but also attract new ones through word-of-mouth recommendations. Therefore, maintaining and improving hospital image should be an ongoing strategy, involving both internal improvements and external communication efforts to ensure long-term patient satisfaction and trust.

### CONCLUSION

This study concludes that service quality, infrastructure, and hospital image each have positive and significant impacts on patient satisfaction in pharmaceutical services at the outpatient pharmacy depot of RSUD Dr. Harjono Ponorogo, collectively explaining 73.8% of the variation in satisfaction. Enhancing service quality—through improvements in tangible facilities, reliability, responsiveness, assurance, and empathy—along with upgrading infrastructure completeness and comfort, and maintaining a positive hospital image, are essential strategies to boost patient satisfaction. Future research is suggested to explore additional factors such as staff professionalism, waiting time management, and patient communication effectiveness to further understand and enhance satisfaction in pharmaceutical services.

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