

Original Research

The Influence of Human Resource Interactions on Loyalty with Patient Satisfaction as an Intervening Variable in Hospital X Surabaya

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Abstract

Background: In the healthcare industry, human resources play a crucial role in steering the organization towards its goals. The interaction between hospital human resources and patients stands out as a pivotal element in service delivery, contributing significantly to the enhancement of patient satisfaction and loyalty.

Objective: This study aims to assess the impact of hospital human resource interactions on loyalty, with patient satisfaction serving as an intervening variable.

Methods: This research adopts a quantitative analytic approach with a cross-sectional design. A random sampling technique was employed to select 339 respondents for data collection. The gathered data will undergo analysis using SmartPLS software (v3.2.9).

Results: The findings indicate a substantial direct effect of interaction on patient loyalty ($\beta=0.161$ and $p\text{-value}=0.015$). Additionally, interaction exerts an influence on patient loyalty through the intervening variable of patient satisfaction ($\beta=0.094$ and $p\text{-value}=0.049$).

Conclusion: This study concludes that the impact of interaction on patient loyalty is more pronounced when assessed directly, as opposed to when mediated by the intervening variable of patient satisfaction.

Keywords: Human resource interactions; Patient loyalty; Patient satisfaction; Indonesia

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Background

Hospitals are services that focus on individual health through curative, preventive, and promotive efforts. Hospital service quality can be assessed through patient satisfaction. A hospital that meets the needs of patients when it provides satisfaction to its patients (Ahmad et al., 2022). In another study, it was stated that high patient satisfaction can increase the level of treatment adherence, thereby improving

patient health as well. This shows that the services provided are following patient expectations (Batbaatar et al., 2017).

Satisfaction is customer feedback on their needs that have been met or by their expectations. Based on previous research, patient satisfaction affects patient trust in health services. This shows that patients have felt comfortable with the services provided, giving rise to a sense of wanting to reuse services in the future (Ramli & Sjahrudin, 2015). Interaction also affects the level of patient satisfaction with the services provided, an impact on the quality of excellent service provided by nurses. This affects the patient's decision to repeat or repurchase the same service and convey messages or impressions to others about the health services that have been provided (Ratna Sari et al., 2021)

Previous research states that patient satisfaction is influenced by how healthcare providers improve patient experience through the services provided (Rogers et al., 2023). Every hospital has a strategy to provide its services. One fundamental aspect of improving excellent service and patient satisfaction is the interaction of human resources that is efficient, accurate, complete, clear, and understood by the recipient of the message (Lestari et al., 2021). Communication and interaction are very important in the process of establishing a therapeutic relationship that can support patient recovery and protect patients from potential harm due to miscommunication (Ratna Sari et al., 2021). Service providers in hospitals are health and non-health workers who have competence in their respective fields. Human resources are one of the important things to achieve organizational goals. The quality of human resource services in hospitals can improve or reduce the quality of health services (Nobakht et al., 2018). Human resources are important in organizations that sell services. Human resources who carry out their duties properly will become an effective organizational driver to achieve their goals. Internal and external factors influence the services provided by employees. In previous research, education and knowledge possessed by human resources or employees are internal factors that can affect service. It underlies a person's how to treat others (Rahayu, 2018). In external factors, one of the influences is employee satisfaction with their organization. Employees who are satisfied with their organization can influence other employees to work well and effectively (Desi Indrawati, 2013).

In providing its services, there is interaction between the company's human resources and customers. Based on the Big Indonesian Dictionary, interaction means a dynamic social relationship between individuals, individuals, and groups, or groups with groups. Interactions that occur between two or more people to obtain or provide information and provide support for health services are also called health service communication.

Human resource relations in hospitals are also related to the skills of officers in their fields (medical and non-medical) and good communication skills (Mao et al., 2020). Some aspects affect health communication between health workers and patients, namely empathy, control, trust, self-disclosure, and confirmation. Empathy is understanding the patient's condition and feelings. Control is being able to control communication with patients. Trust is being able to build trust with the patient. Self-disclosure is being able to state the facts to the patient. Confirmation is asking back regarding the information that has been provided (Caninsti et al., 2018). Patients who are satisfied with the services they get will have the potential to become loyal patients. Customer loyalty is a customer commitment to buy or reuse a product or service again in the future (Mortazavi et al., 2009).

Customer loyalty is obtained from a good relationship between the product or service provider and the customer. Based on previous research, loyalty is obtained through satisfaction. In health organizations such as hospitals, patients will return to hospitals that have been visited with a sense of trust based on previous treatment experiences (Astuti & Nagase, 2014). The purpose of this study was to determine the effect of hospital human resource interactions on loyalty through patient satisfaction as an intervening variable.

Methods

Study design

This study is an analytic, quantitative study with a cross-sectional design.

Setting

This research was conducted at a type B hospital that collaborates with BPJS, namely X Hospital.

Sample

The population of this study was outpatients of the Internal Medicine Poly of hospital X with several inclusion criteria, namely internal medicine poly outpatients who had been hospitalized for at least three

days in the period January to March 2020 and were aged 18-55 years. Sampling this study using a systematic random sampling technique. The sample of this study amounted to 339 people.

Instrument

The instrument used in this research is a questionnaire that has been tested for validation and reliability. The questionnaire in this study contains hospital human resource interactions, patient satisfaction, and patient loyalty.

Data Analysis

The data that has been collected is processed using SPSS software and then analyzed using SmartPLS software to test the influence between variables.

Ethical Considerations

This research has passed the ethical test by the Health Research Ethics Commission of the Hafshawaty Pesantren Zainul Hasan College of Health Sciences with Number KEPK/222/STIKes-PZH/IX/2019.

Results

This study's respondents filled out questionnaires about interaction, satisfaction, and loyalty. The questionnaire contained respondent characteristics in the form of age. The results of the recapitulation of the age of respondents are divided into three age groups, namely 18-24 years, 25-40 years, and 41-55 years. The following is the data obtained from the questionnaire results

Table 1 Frequency Distribution of Respondent Characteristics

Characteristics	Frequency	
	n	%
Age		
Generation Z (18-24 Years)	127	37.5
Generation Y (25-40 Years)	108	31.8
Generation X (41-55 Years)	104	30.7
Gender		
Male	144	42.5
Female	195	57.5
Total	339	100

Based on the study results, the majority of respondents aged 18 to 24 years were 35.5%. While the minority of respondents aged 41 to 55 years was 30.7%. In terms of gender characteristics, the majority of respondents were female. Meanwhile, male respondents did not reach half of the respondents.

Table 2 Frequency Distribution of Hospital Human Resource Interaction

Human Resource Interaction	Category	Frequency	
		n	%
Nurse interaction (X1.3)	Poor	0	0.0
	Sufficient	13	3.8
	Good	326	96.2
Doctor interaction (X1.5)	Poor	0	0.0
	Sufficient	18	5.3
	Good	321	94.7
Pharmacy staff interaction (X1.4)	Poor	0	0.0
	Sufficient	19	5.6
	Good	320	94.4
Administrative staff interaction (X1.1)	Poor	0	0.0
	Sufficient	23	6.8
	Good	316	93.2
Medical support interaction (X1.2)	Poor	0	0.0
	Sufficient	46	13.6
	Good	293	86.4

In this study, patient interactions with health workers and health service support staff are divided into 5 indicators, namely the interaction of nurses, doctors, pharmaceutical workers, administrative staff, and medical support (nutrition, radiology, and laboratory staff) with patients. The assessment given by respondents regarding the interaction of human resources in the hospital is divided into 3 categories, namely poor, sufficient, and good.

Based on the table, there are no poor assessments of interactions in health services at RS X with patients. Interaction with the most "good" category assessment is the interaction of health services nurses provide, which is 96.2 %. In addition, medical support interactions received the least "good" rating from respondents, as much as 86.4%, and the most "fair" rating of 13.6%.

Table 3 Frequency Distribution of Hospital Patient Satisfaction and Patient Loyalty Recapitulation

Variable	Category	Frequency	
		n	%
Satisfaction	Low	0	0.0
	Sufficient	13	3.8
	High	326	96.2
Loyalty	Low	0	0.0
	Sufficient	19	5.6
	High	320	94.4
Total		339	100.0

In this study, the patient satisfaction variable is the patient's feelings towards the X Hospital resource service, which is described through 5 indicators of patient satisfaction, namely presence, skill, care, respect, and openness. **Table 3** is a recapitulation of respondents' answers, which have been categorized into three categories, namely low, moderate, and high. Based on the table, the majority of respondents had high satisfaction of 96.2%. Meanwhile, 3.8% of respondents were sufficiently satisfied with the services provided by X Hospital.

Patient loyalty has two indicators, namely, repeat use of services and recommendations for the benefit of services. **Table 4** is the result of respondent's answers based on two indicators of patient loyalty, which have been recapitulated into three categories, namely low, moderate, and high. Based on the table, the majority of respondents have high loyalty of 94.4% of respondents. In comparison, sufficient loyalty is owned by 5.6%.

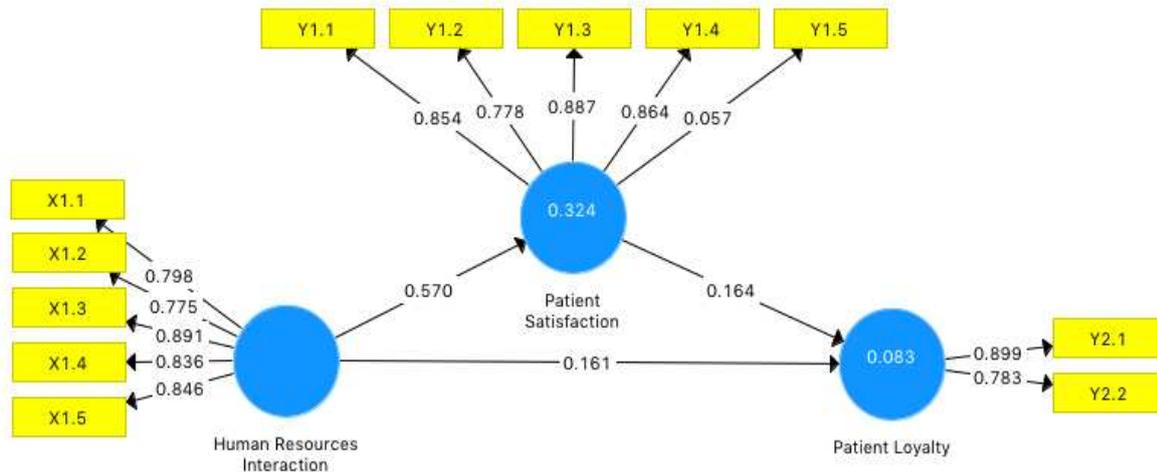


Figure 1 Measurement Model (Outer Model)

The outer model aims to validate the relationship between latent variables and their indicators. **Figure 1** shows the factor loading value of each indicator on each variable, resulting in the figure below. Valid indicators have a loading factor of more than 0 (Hair et al., 1998). There is one indicator forming the satisfaction variable that has a factor loading value below 0.5, namely Y1.5 (openness) with several 0.057. This shows that the Y1.5 indicator does not contribute to the latent variable, so it is not processed further in the bootstrapping analysis. The nurse is the strongest indicator of the human resource interaction variable, and the weakest is the medical support officer. This indicates the need for efforts to improve the quality of interaction of medical support staff with patients. The coefficient path from the interaction of

human resources to loyalty through patient satisfaction is $\beta = 0.094$ and $p\text{-value} = 0.049$. In comparison, the coefficient path from human resource interaction to patient loyalty is $\beta = 0.161$ and $p\text{-value} = 0.015$.

Table 4 Relationship Between Variables

Relationship Between Variables	Coefficient (Original Sample)	TStatistic (t_{count})	P Values	Description
Human Resources Interaction -> Patient Loyalty	0.164	2.437	0.015	Significance
Human Resources Interaction -> Patient Satisfaction	0.570	13.189	0.000	Significance
Patient Satisfaction -> Patient Loyalty	0.159	2.059	0.040	Significance

Bootstrapping is a process to assess the significance level or probability of direct effects, indirect effects, and total effects. **Table 4** shows that the three relationships between these variables have a significant relationship, resulting in the figure below.

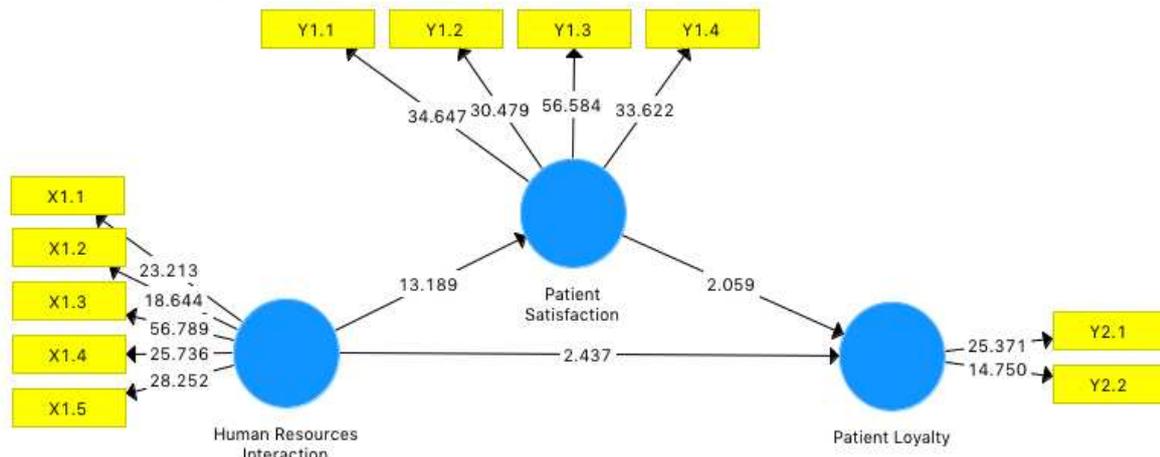


Figure 2 Model Structural (Inner Model)

Table 4 and **Figure 2** show that three variable relationships have a t-statistic value more significant than the T-table (1.96). In addition, medical support interactions received the least "good" rating from respondents, as much as 86.4%, and the most "fair" rating of 13.6%.

Discussion

Based on the questionnaire results, nurses have the most "good" ratings than other hospital human resources. This shows that nurses at X Hospital have a good relationship with patients. Nurses are one of the human resources that have a dominant role in hospitals because of their role in providing nursing care directly to patients. Nurses are health workers who relatively meet with patients for 24 hours, so they know the patient's actual condition (Indrayadi et al., 2022). In this study, nurse interaction means relationship or communication with patients. This includes the presence, skills, and concern of nurses in caring for patients. Nurses who have good knowledge are competent in caring for patients. Good competence can foster a good attitude when caring for patients. In addition, nurses with good knowledge can improve their performance in the hospital (Jamie, 2020). Knowledge is a dominant thing that is very important for the formation of a person's actions from the experience of several studies, it turns out that activities that are not based on good knowledge will not produce good results. Nurses' sufficient knowledge of the patient's culture, language, habits, and beliefs can help them communicate well with patients without obstacles (Puspita Dewi, 2018).

After nurses, the service interactions doctors provide have the most "good" ratings at 94.7%. A good doctor-patient relationship will support the patient's treatment process. One way to foster good relationships with patients is to master communication techniques so that patient trust in doctors arises (Setyawan, 2018). Good communication is one way for doctors to provide a sense of patient concern. Therefore, communication skills are essential for a doctor to have. According to research conducted by

Sunaryo et al., there is a significant relationship between doctor-patient communication and patient satisfaction, meaning that the better the doctor-patient communication, the higher the patient satisfaction (Sunaryo et al., 2021).

Equally important is the timeliness of the doctor's attendance. This is because it can affect patient satisfaction. Based on previous research, the doctor's accuracy in service is a form of doctor commitment. Good doctor discipline is the success of the hospital leadership strategy to realize good service to patients (Isdiani & Sudiro, 2019).

One of the most essential departments in a hospital is the pharmacy department. The interaction between the pharmacy staff and the patient occurs when the patient takes the medicine after being prescribed the medication by the doctor. Pharmacy officers will provide information related to the drugs that patients must take. This study rated patient interactions with pharmacy officers "good" at 94.4%. This shows that X Hospital pharmacy officers have provided good service to patients.

Pharmaceutical services are one of the departments that contribute greatly to the development of hospital services. This department aims to improve the quality of life of patients as a provider of medicines in a patient-centered hospital (Nisa et al., 2023). In their interaction with patients, pharmacy officers need the ability, knowledge, and skills in the field of pharmacology to show a caring attitude toward patients to create a harmonious relationship with patients. In the era of increasingly competitive health services, pharmacy resources also play a role in providing good service for patient satisfaction (Khudair & Raza, 2013).

Administration is one of the services that must exist in every health facility. Hospital administration services begin when new patients arrive at the hospital and continue until they leave the hospital. Based on the results of the study, the interaction of administrative staff was rated "good" by 93.2% of respondents. Based on previous research, one of the factors of patient satisfaction is fast, friendly, and easy administrative services. These three things can affect patient perceptions of service quality. In addition, patient dissatisfaction can reduce profits for health facilities due to decreased patient retention (Alrasheedi et al., 2019).

Health services in other hospitals are nutrition, radiology, and laboratory services. Based on this study's results, interactions with "sufficient" ratings are more than other officers, namely interactions with nutrition, radiology, and laboratory service officers totaling 13.6%. The nutrition installation serves the nutrition of inpatients and outpatients. In addition, the nutrition installation also organizes food for patients (Nuryani et al., 2020). Meanwhile, radiology and laboratory are services that support the doctor's diagnosis through examination of the inside of the human body.

Based on previous research, some of the factors that affect patient satisfaction with the nutrition installation are food quality, food taste, and the attitude of staff in serving patients (Esfandiari & Wahini, 2017). Nutrition officers need to pay attention to the patient's condition through the food served by building communication. Communication with patients can be done by motivating patients to recover quickly. While in the radiology installation, the officer will interact with the patient by explaining the examination procedure. A radiographer must be able to respect the patient during the examination, put themselves in the situation experienced by the patient and explain the examination instructions to the patient in a language that is easy to understand. Based on previous research, a friendly radiographer is the most dominant factor favored by patients (Jannah et al., 2017). In addition, based on previous research, service problems that can arise in the laboratory are unclear officer explanations that result in patients not understanding (Rahma, 2022). This proves that good and effective communication skills are needed for health service providers.

Positive relationships between patients and human resources in hospitals can increase patient satisfaction. Some attitudes that can improve patient satisfaction are empathy, equality, positive attitude, openness, and support (Khairani et al., 2021). Positive interactions can be done by listening and allowing customers to express their concerns so that they are considered a particular concern, creating a feeling of comfort and satisfaction in customers (Delafrooz et al., 2013). In the results of this study, the majority of patients have high satisfaction and loyalty. Based on the results of previous research, patient satisfaction is also beneficial for hospital finances. Previous research states that high patient satisfaction is associated with increased market share, financial benefits, and decreased malpractice-related claims. Factors related to patient satisfaction include doctor-patient communication, patient waiting time, and provision of continuous care (Shirley & Sanders, 2013). Loyal consumers are satisfied and enthusiastic about recommending services to anyone they know. So, consumer loyalty is created from a sense of satisfaction (Violani, 2023). Companies or organizations that have high customer loyalty can set high prices without suffering losses or losing market share (Shirley & Sanders, 2013). This means that customer loyalty provides financial benefits to the company.

The Smart PLS analysis results show that the correlation between variables is significant, which means that there is an influence between variables. Human resource interaction variables influence patient satisfaction and loyalty. Patient satisfaction as an intervening variable does not have a significant effect. However, the actual impact of human resource interaction on satisfaction is very large. The effect of human resource interaction on loyalty is stronger than the effect of human resource interaction on loyalty through patient satisfaction. This shows that human resource interactions need to be prioritized because they can create loyalty directly.

Based on previous research, interactions in the form of skills such as communication skills and competence by health workers affect satisfaction and also have a direct effect on patient loyalty. In addition, these interactions also affect patient loyalty through patient satisfaction (AlOmari, 2022). This research is in line with this study. Other studies also state that human resource interactions in health services affect patient satisfaction and loyalty. The human resource interactions in question are responsiveness, empathy, and respect (Rahman et al., 2021).

Research conducted by Sari et al. shows that interactions carried out by nurses significantly affect the satisfaction and loyalty of hospital patients. This is because the attitude and behavior of nurses in communication, individual interest, and good service delivery influence patient satisfaction. Patient satisfaction generally concerns a person's attitude when having an experience in health services. Satisfaction is an emotional condition related to previous experiences, expectations, and reality. Satisfaction is achieved when a positive perception is formed between expectations and reality of the quality of service received. Finally, satisfaction at a certain level can lead to patient loyalty (Ratna Sari et al., 2021).

The key to organizational success in the service sector is the ability of human resources to provide good service. Customer response in the form of satisfaction and loyalty is influenced by good and strong interpersonal relationships between employees and customers. In addition, customer responses can contribute to organizational profits, namely in terms of recommending services and sharing good experiences (Anaza, 2015). The relationship between hospital human resources and patients is related to the quality of service provided. Based on previous research, patients are satisfied with good care, such as providing information to patients regarding the care they receive and actions that express concern for the patient's condition. This can make patients feel comfortable (Morgan & Moffatt, 2008). The result of patient satisfaction is patient trust in repeat services at the health facility (Hu et al., 2021).

The interaction of hospital human resources is one of the important aspects of creating customer satisfaction. Poor interactions will lead to negative perceptions, thus reducing patient satisfaction and loyalty. Good interactions with patients, for example, create an atmosphere conducive to reducing anxiety and helping patients to adapt (Apriliyanti et al., 2021).

Conclusion

Based on the results of the study, it was concluded that most respondents considered that the interaction of human resources (nurses, doctors, pharmaceutical officers, administrative officers, and medical support) with patients at X Medical Hospital was good. In addition, respondents have high satisfaction and loyalty to X Hospital's services. Human resource interaction variables influence patient satisfaction and loyalty. However, as an intervening variable, patient satisfaction does not have a significant effect. The effect of human resource interaction on loyalty is stronger than the effect of human resource interaction on loyalty through patient satisfaction. This shows that human resource interaction needs to be a priority because it can create loyalty directly. The stronger interaction variable is influenced by the indicator of nurse interaction with patients, and the weakest is influenced by the indicator of medical support staff interaction. So, it is necessary to make efforts to improve the quality of interaction between medical support staff to patients.

Declaration Conflicting Interest

The authors have no conflicts of interest to declare.

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Author Contribution

The author confirm contribution to the paper as follows: study conception and design, Author, data collection, analysis and interpretation of results, draft manuscript preparation, reviewed the results of the manuscript

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