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The Effect of Service Quality, HR Competence and Service Accessibility on Patient Satisfaction at Urangagung Health Center

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Abstract. This study aims to examine the effect of service quality, competence of human resources (HR), and service accessibility on patient satisfaction at community health centers. The method used in this research is quantitative, by combining literature review and empirical data on patient services obtained based on the results of filling out questionnaires. In this study, the total sample size was 143 outpatients, and accidental sampling was used as the sampling technique. The data analysis approach used in this study uses Partial Least Square (PLS) through the utilization of SmartPLS version 3 software. that Patient satisfaction is determined by excellent service quality, competent human resources and ease of accessibility which we present using a Likert scale assessment. Increasing 3 variables is proven to increase patient satisfaction in health care institutions at all levels.

Keywords: Accessibility, Quality of service, patient satisfaction, Human Resources

1 Introduction

Improving the quality of health services is the main demand in realizing a better degree of public health. One indicator of the success of health services is patient satisfaction. Community Health Centers (Puskesmas) as first-level health care facilities have a strategic role in providing quality and satisfying services for the community[1] . A common phenomenon that occurs is the low patient satisfaction with health center services. Several studies have revealed this condition. Research by the Indonesian Ministry of Health (2020) states that patient satisfaction with puskesmas services nationally is only 68.8%[2] . Meanwhile, the minimum service standard figure set is 90%. The same thing was also stated in a study by Nurachmah et al. that 48.2% of patients were dissatisfied with puskesmas services .[3]

A more specific problem also occurred at the Urangagung Health Center. In the last three years (2021-2023) there has been a decrease in the number of patient visits from 42,084 to 32,790 visits[4] . In addition, there have been various complaints from patients such as uncomfortable waiting rooms and difficult parking lots. This condition indicates patient dissatisfaction with the services

Table 1. Number of Outpatient Visits at Urangagung Health Center

Year	Male	Female	Total
2021	16.424	25.660	42.084
2022	21.251	17.251	38.502
2023	17.395	15.395	32.790

Source: Sidoarjo District Health Profile 2021-2023

The phenomenon of low competence of human resources (HR), especially health workers, is also a common problem in health care facilities. A study by the Indonesian Ministry of Health states that only 62.5% of health workers in health centers have competencies according to standards[5] . Specific problems related to HR competencies are also suspected to occur at Urangagung Health Center. Based on initial observations, indications were found such as patient complaints related to unfriendly services, unclear officer explanations and seemingly fast-paced which indicated a lack of competence of some staff.

Accessibility of health services is also an important factor in ensuring that the community can obtain the services they need easily. A common phenomenon that occurs is the limited accessibility of services at health facilities, especially in rural and remote areas. A World Health Organization study revealed that 35% of people in developing countries experience difficulties in accessing health services due to various obstacles such as distance,

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travel time, transportation costs, and limited availability of facilities[6] . Specific problems related to accessibility were also found in Urangagung Health Center. Based on initial observations, around 27% of people in the puskesmas' working area stated that it was difficult to reach the location of the puskesmas because the distance was too far and there was a lack of public transportation facilities.

To overcome these problems, it is necessary to evaluate and improve the factors that influence patient satisfaction, such as service quality, HR competence, and service accessibility. However, there is a *research gap* regarding the influence of these three factors on patient satisfaction at puskesmas. Several studies have found a significant effect of service quality, HR competence, and service accessibility on patient satisfaction at puskesmas, such as research by Bhandari et al.[7] which states that service quality and HR competence have a positive effect on patient satisfaction, and research by Susanti et al.[8] which reveals that service accessibility is the main predictor of patient satisfaction in rural puskesmas. Research by Arifin et al.[9] also found a significant effect of the three factors together on puskesmas patient satisfaction. But on the other hand, several other studies[10] actually show insignificant results or only indirect effects, such as a systematic review by Sari et al.[10] which concluded that the effect of the three factors on puskesmas patient satisfaction is still inconsistent, and research by Widyastuti et al.[11] which found that service accessibility only acts as a mediator in the relationship between service quality and HR competence with patient satisfaction. Research by Kurniawan et al.[12] also showed insignificant results from the three factors on puskesmas patient satisfaction in urban areas.

Therefore, this study is important to examine the effect of service quality, HR competence, and service accessibility on patient satisfaction at the Urangagung Health Center specifically. The results are expected to provide concrete recommendations for improving the quality of health services in primary care facilities.

A. Problem Formulation

Based on the background above, the problem formulation in this study is whether there is a significant influence between service quality, HR competence and service accessibility on patient satisfaction at the Urangagung Health Center?

B. Research Objectives

This study aims to investigate the influence between service quality, HR competence, and service accessibility in influencing patient satisfaction at the Urangagung Health Center.

C. Research Benefits

This study provides important benefits, including a contribution to science by providing more in-depth input on several factors that affect patient satisfaction at the Urangagung Health Center. The results of this research can be used as a basis for providing recommendations to the management of the health center in an effort to improve service quality, HR competence and service accessibility to increase patient satisfaction. In addition, this research also has the potential to contribute to the improvement of the health system more broadly, especially in the context of health centers in Indonesia. Thus, this research is expected to help Puskesmas Urangagung to focus more on improving service quality, HR competencies and service accessibility as well as improving the health system as a whole.

2 Literature Review

2.1 Service Quality

Service quality is a crucial factor in determining patient satisfaction with the health services received. The concept of health service quality has been widely studied in various studies using the SERVQUAL (Service Quality) model proposed by Parasuraman et al. SERVQUAL identifies five main dimensions that determine service quality, namely reliability, responsiveness, assurance, tangibles, and empathy. [13]

Yunike et al.'s research on Puskesmas in Semarang City found that the five dimensions of service quality have a positive and significant influence on patient satisfaction[14] . The better the quality of service perceived by patients from the aspects of reliability, responsiveness, confidence, tangibility, and empathy, the higher their satisfaction will be.

Similar findings were also presented in Wulandari's research at the Malang City Regional General Hospital, namely the dimensions of reliability and responsiveness, being the main predictors in increasing patient satisfaction. Timeliness of service, responsiveness of officers in responding to complaints, and the ability of officers to provide clear explanations to patients are important factors that influence patient [15]

Research by Gama et al. in Brazilian hospitals found that the five dimensions of SERVQUAL have a positive effect on patient satisfaction. The dimensions of reliability and responsiveness are the strongest predictors[16] . Similar findings were also presented by Rohmah et al in Indonesia, which stated that improving service quality from the aspects of reliability and empathy of officers was effective in increasing satisfaction. [17]

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In addition, research by Amalia et al in a private hospital in Bandung City revealed that the quality of health services not only has a direct effect on patient satisfaction, but also has an indirect effect through the variables of trust and patient commitment. The better the quality of service provided, it will increase patient trust and commitment, which in turn contributes to increasing satisfaction. [18]

From a primary care perspective, Ayon and Sermsri examined the quality of health center services in Thailand. Results showed that the dimensions of reliability, responsiveness, and empathy were the main predictors of patient satisfaction, as were timeliness, communication skills of staff, and concern for ' needs. [19]

Based on the literature review, it can be hypothesized that health service quality has a positive effect on patient satisfaction at the Urangagung Health Center. This hypothesis is built with reference to the results of previous studies which consistently show a positive and significant influence between health service quality and patient satisfaction. The better the quality of service provided to patients by paying attention to the dimensions of reliability, responsiveness, confidence, tangibility, and empathy, the more patient satisfaction will increase in receiving health services.

2.2 HR Competency

Employee or human resource competencies have become an important factor influencing satisfaction in recent years. Several studies have been conducted to examine the relationship between these two variables. Research by Pratiwi et al. in Indonesia found that human resource competencies, including technical and non-technical competencies, positively influence patient satisfaction in hospitals. Technical competencies include medical knowledge and skills, while non-technical competencies include effective communication, empathy, and a friendly attitude. Patients tend to be more satisfied when employees demonstrate high competence in delivering [20]

In line with that, a study by Alotaibi et al. in Saudi Arabia revealed that the competence of medical staff, including doctors and nurses, is a significant predictor of patient satisfaction. Patients felt more satisfied when medical staff demonstrated adequate knowledge and skills in diagnosing and treating their health problems .[21]

In Indonesia, research by Supriyanto and Cholil shows that employee competencies, such as technical ability, communication skills, and courtesy, have a positive influence on patient satisfaction in hospitals. Patients tend to be more satisfied when employees have good competence in providing health services .[22]

In an international context, a study by Mosadeghrad in Iran found that human resource competencies, including knowledge, skills and attitudes, are important factors that influence patient satisfaction. Patients are more satisfied when employees demonstrate high competence in delivering services. [23]

Research by Andaleeb et al. in Bangladesh found that the competence of hospital staff, including doctors, nurses, and administrative staff, has a significant influence on patient satisfaction. Competencies include knowledge, skills, attitudes, and good communication skills. Patients tend to be more satisfied when staff demonstrate high competence in delivering health services .[24]

A study by Surianti et al. in Makassar City, Indonesia, revealed that nurse competencies, such as clinical knowledge, technical skills, and interpersonal abilities, positively influence patient satisfaction. Patients feel more satisfied when nurses have adequate competence in providing quality care .[25]

In Turkey, a study by Yildirim et al. found that hospital staff competence, both technical and non-technical competence, was a significant predictor of patient satisfaction. Patients were more satisfied when staff had high competence in delivering quality services and were friendly and caring .[26]

Based on these studies, researchers have further strengthened the hypothesis that employee or human resource competencies, including knowledge, skills, attitudes, and communication skills, have a positive influence on patient satisfaction in various countries.

Based on these studies, researchers hypothesize that employee or human resource competencies, such as knowledge, skills, communication skills, empathy, and a friendly attitude, have a positive influence on patient satisfaction. The higher the competence of employees or human resources, the greater the satisfaction felt by patients.

2.3 Service Accessibility

Service accessibility has become an important factor affecting patient satisfaction in recent years. Several studies have been conducted to examine the relationship between these two variables.

Research by Saputra et al. in Indonesia found that service accessibility, such as ease of obtaining services, availability of facilities, and short waiting times, has a positive effect on patient satisfaction. Patients tend to be more satisfied when they can access services easily and quickly .[27]

Correspondingly, a study by Naseer et al. in Pakistan revealed that service accessibility, including convenient location, flexible operating hours, and simple registration process, was a significant predictor of patient satisfaction. Patients feel more satisfied when they can access health services easily and [28]

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In Indonesia, research by Supriyanto and Cholil shows that service accessibility, such as proximity, availability of transportation, and affordable cost, has a positive influence on patient satisfaction in hospitals. Patients tend to be more satisfied when they can access health services without geographical or barriers. [29]

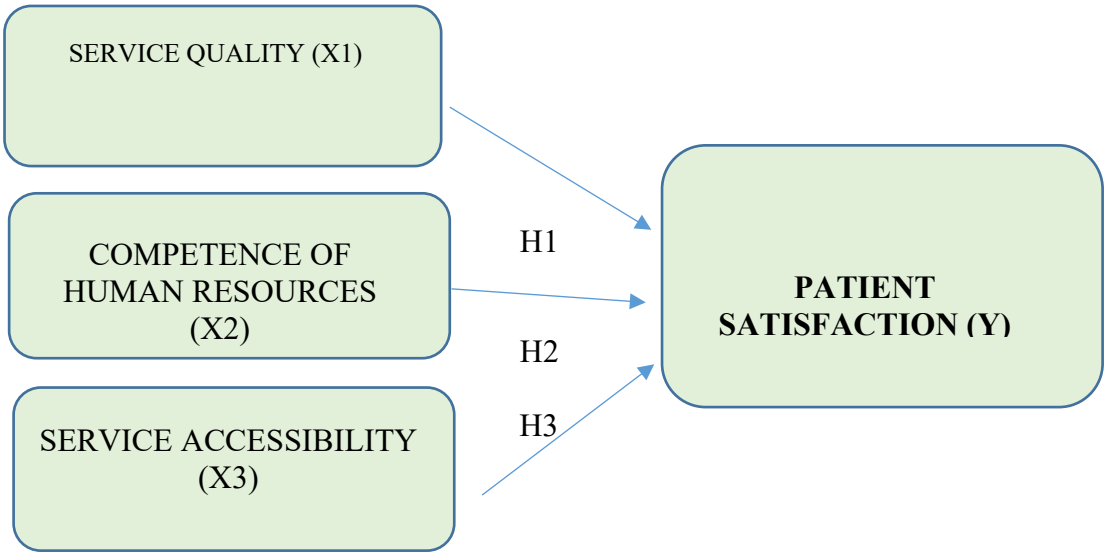
In an international context, a study conducted by Aday et al. (2022) explored the relationship between healthcare accessibility and patient satisfaction in the United States. Using national survey data, they found that better access to healthcare, such as proximity to healthcare facilities, availability of care, and affordable costs, was significantly associated with higher levels of patient satisfaction. These results demonstrate the importance of improving healthcare accessibility to ensure patients receive necessary care and are satisfied with their care experience[30]

Research by Rahmayanti et al. in Pekanbaru City, Indonesia, found that service accessibility, such as strategic location, flexible service time, and ease of obtaining information, has a positive effect on patient satisfaction. Patients feel more satisfied when they can access health services easily[31] . Research by Shan et al. in China shows that service accessibility, such as the availability of complete facilities, short waiting times, and affordable costs, has a positive influence on patient satisfaction. Patients are more satisfied when they can access services without [32]

From these studies, researchers strengthened the hypothesis that service accessibility, including strategic location, adequate transportation, flexible service time, fast process, availability of facilities, short waiting time, and affordable cost, has a positive influence on patient satisfaction in various countries.

2.4 Conceptual Framework

This conceptual framework is used to see the relationship that combines the independent variables (X) and the dependent variable (Y).



In the study, the following hypothesis was obtained:
H1: Service quality has a significant influence on patient satisfaction,
H2. HR competence has a significant influence on patient satisfaction,
H3. Service accessibility has a significant influence on patient satisfaction,

The operational definition of research variables is used to set the limits of understanding of the variables being studied. This operational definition also plays an important role in making measuring instruments. Patient satisfaction is how satisfied or dissatisfied the patient is after receiving health services, which is compared between what they receive and what they expect or need.

The operational definition of service quality in this study includes several important aspects. First, reliability is the ability of officers to provide the type of service that has been promised to patients precisely and correctly. Second, *responsiveness* is the awareness and desire of officers to immediately act to help patients by providing services in a timely manner. Third, assurance includes the officer's ability to respect patients and master the knowledge and expertise needed to respond to any questions or problems faced by patients. Fourth, empathy is the officer's expertise in giving special attention to each patient. And finally, physical evidence refers to the physical appearance that can attract patients[33]

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According to the competency theory formulated by Spencer and Spencer, the concept of competency can be defined as a trait that demonstrates an individual's capacity to effectively navigate a particular professional domain, which then translates into fulfilling job requirements. This capacity is supported by various factors such as knowledge, technical skills, communication skills and a friendly attitude in serving. [34]

Health service accessibility refers to the ease or opportunity for individuals to obtain the health services they need, both physically and financially. Access to health services covers several aspects, including the availability of health facilities, geographical distance, cost of services, as well as social and cultural factors that can affect a person's ability to obtain quality health services.

To make it easier to understand the variables, sub-variable indicators, the following table is compiled:

The Table of Variables, Operational Definitions, and Indicators presented below serves as an important instrument used to describe and establish connections among important aspects related to patient satisfaction. This will provide a thorough and accessible framework for understanding

Table 1. Variables, Summary of Operational Definitions and Indicators

Variables	Operational Definition	Indicator	Indicator Reference
1. Service quality	The quality of service provided by the Urangagung Health Center to patients, which is determined by reliability, responsiveness of officers, service assurance, empathy (care) of officers towards patients, as well as physical evidence of facilities and equipment available. .	Reliability Responsiveness Assurance. Empathy or care (empathy) Physical evidence or direct evidence (tangibles)	[35]
2.Human Resource Competencies	competencies possessed by human resources (health workers and staff) at the Urangagung Health Center in providing services to patients, which are reflected in knowledge, technical skills, communication skills, attitudes and serving behavior.	Knowledge Technical Skills Attitude and behavior Communication Skills	[36]
3. Service Accessibility	The ease felt by patients in reaching and accessing services at the Urangagung Health Center, which is indicated by the ease of reaching the location, availability of public transportation facilities, costs, operating hours of the health center, and ease of obtaining service information.	location Availability of public transportation facilities Affordable service fee time Ease of getting service information	[37]
4. Patient Satisfaction	The patient's overall feeling of satisfaction with the service received at the Urangagung Health Center, which is assessed based on satisfaction with waiting time, facilities, staff attitudes and services, information provided, and service outcomes.	satisfaction with waiting time Satisfaction with facilities, attitude and service of staff Satisfaction with the information provided Satisfaction with service results	[38]

3 Research Method

This study used a quantitative methodology to assess the impact of health service quality, human resource competence, and service accessibility on patient satisfaction.

The target population for this study was all patients who had received services at the Urangagung Health Center at the time of the study[39] . Determination of the sample using the Cochran formula where this formula can be used to determine the sample size needed for the study to analyze the relationship between the independent variable and the dependent variable. The sampling procedure was *accidental sampling*, namely patients with mild disease categories or healthy visiting patients who were encountered at the time of the study where they had previously received health services at the Urangagung Health Center until they met the total number of

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samples that had been determined. The calculation of the sample size with an average patient population per month of 3000 is as follows:

$$n = \frac{N}{1+\frac{N}{N_e}}$$

Where:

- n is the desired sample size,
- N is the population size (3000 in this case),
- Ne is the ratio of the population that should be selected in the sample (allowed in percentage),
- Z is the z-score corresponding to the desired confidence level (e.g., for 95% confidence, Z is about 1.96),
- e is the allowable margin of error (usually between 0.05 and 0.10).

$$n = \frac{3000}{1+\frac{3000}{3000\times 0{,}05}}$$

$$n = \frac{3000}{1+\frac{3000}{150}}$$

$$n = \frac{3000}{1+20}$$

$$n = \frac{3000}{21}$$

$$n \approx 142,86$$

From the formula, it was rounded and obtained an approximate sample of 143 Puskesmas patients. This study will collect quantitative data through questionnaires filled out by patients at the Urangagung Health Center, by assessing their perceptions of service quality, HR competence and accessibility and the satisfaction experienced by patients. The main source of data is primary data, namely patients who have utilized Puskesmas services in the form of healthy visits or minor illness visits that are very likely to fill out the questionnaire. In addition, there are secondary data in the form of data from records or documentation at the Puskesmas and from relevant literature, statistical data, and other sources that will be used to support the analysis. By utilizing primary quantitative data from questionnaires and secondary sources, this study seeks to create a picture that includes variables that affect patient satisfaction at Urangagung Health Center, and will provide a basis for recommendations to improve health services in health facilities.

In this study, the questionnaire will be a tool for data collection. Data collection by questionnaire is a way of collecting data by giving a set of questions or written statements to respondents to answer. The Likert scale will be used for measurement, which includes 5 answer options (strongly disagree, disagree, neutral, agree, and strongly agree) which will be used to collect respondents' attitudes, opinions and perceptions[40]The variables to be measured by the Likert Scale are described into variable indicators, which are then used as the basis for compiling instrument items. If from the data questionnaire it is known that the data is incomplete, it will be immediately reconfirmed for the willingness to complete the data.

For research on the influence of service quality, HR competence and accessibility and the satisfaction experienced by patients at the Urangagung Health Center, a combination of the most relevant data analysis techniques can be used. Descriptive analysis can provide an overview of the characteristics of the study variables

Furthermore, the data that has been collected will be processed using the Partial Least Square (PLS) analysis method using Smart PLS software version 3[41] PLS is a suitable statistical analysis method for the study of "The Effect of Service Quality, HR Competence and Accessibility on Patient Satisfaction" because this method has the ability to handle latent variables, work with small sample sizes, and tolerance for non-normality of data. In addition, PLS has good predictive ability and is easy to use.

4 Results and Discussion

4.1 Results

Based on the existing operational variables, the research model was analyzed using the PLS *(Partial Least Squares*) algorithm. This algorithm is used to test the validity and reliability of the model. Model validity testing is carried out on the outer model (measurement model), where the relationship between indicators and their constructs is evaluated. Factor loading values are used to measure construct validity, where higher values indicate a stronger relationship between the indicator and its construct.

Furthermore, the reliability of the model is tested using three metrics, namely *Composite Reliability (CR), Cronbach's Alpha (CA) and Average Variance Extracted (AVE). Composite Reliability CR is* used to measure the

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internal consistency of indicators in measuring constructs. A high CR value indicates good internal reliability. *Cronbach's Alpha (CA)* for measures the average correlation between items in a construct. A high CA value indicates good internal reliability. The last one uses *Average Variance Extracted (AVE)* which measures the average variance explained by the indicators in the construct. A high AVE value indicates good construct convergence. AVE is used to determine the achievement of discriminant validity requirements. The minimum value to state that reliability has been achieved is 0.50.

The first to be tested is the questionnaire, where a good questionnaire must be able to measure what you want to measure. The validity test is carried out to ensure that each question in the questionnaire is in accordance with the variable to be measured (construct). The level of validity of the questionnaire can be seen in the *outer loading* results. *The loading factor* value on each question must be greater than or equal to 0.5 to indicate that the question is valid. The higher the *loading factor* value, the stronger the relationship between the question and the variable to be measured

This can be explained in the figure and table below.

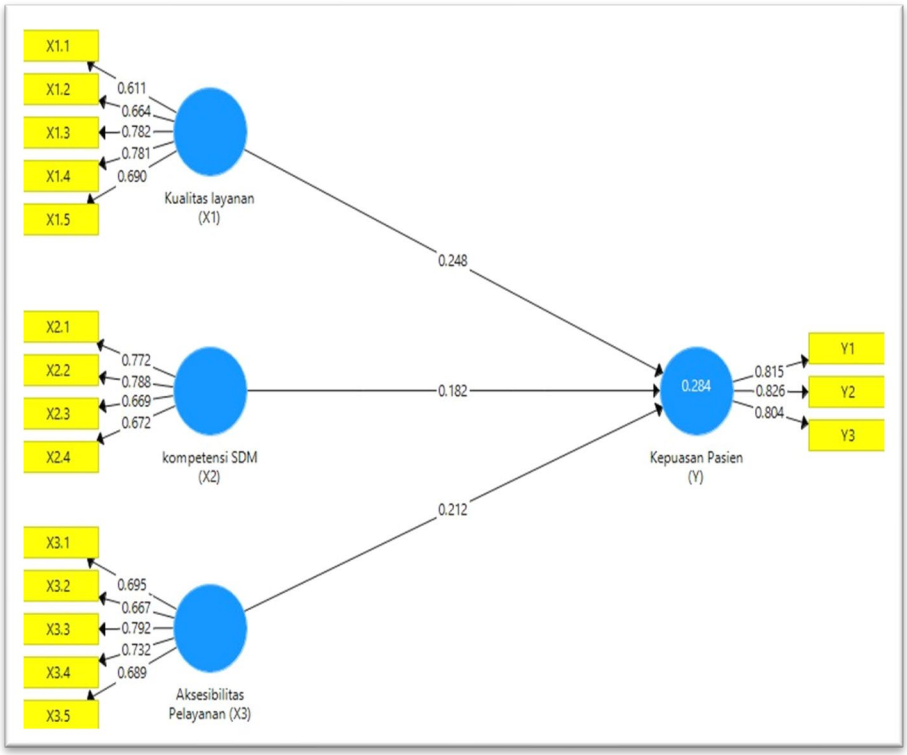


Figure 1. Structural Model PLS Algorithm

Table 2. Outer Loading Table

Question	Service quality (X1)	HR competence (X2)	Service Accessibility (X3)	Patient Satisfaction (Y)
X1.1	0,611			
X1.2	0,664			
X1.3	0,782			
X1.4	0,781			
X1.5	0,690			
X2.1		0,772		
X2.2		0,788		
X2.3		0,669		
X2.4		0,672		
X3.1			0,695	
X3.2			0,667	

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X3.3	0,792	
X3.4	0,732	
X3.5	0,689	
Y1		0,815
Y2		0,826
Y3		0,804

Source: PLS model

Outer model results are used to check indicators for each variable. According to Hair et al, the *loading factor* indicator value that exceeds 0.4 can be said to be valid[42] . Based on Figure 1, it can be seen from each variable service quality (X1), HR competence (X2), Service Accessibility (X3), and *Patient satisfaction* (Y). *The loading* factor value is the Service Quality indicator (X1.1) of 0.611, the HR Competency indicator (X2.1) of 0.772, the *Service Accessibility* indicator X3.1) of .695, and *the Patient satisfaction* indicator (Y1) of 0.815. each variable with a *loading* factor number exceeding 0.5 can be interpreted as valid.

Next is to analyze *Contruct Reliability. Contruct Reliability* is measuring the reliability of latent variable constructs. The value that is considered reliable must be above 0.70. *Construct reliability* is the same as *Cronbach Alpha.* Below is a table of reliability analysis results:

Table 3. Composite Reliability, Cronbach's Alpha and Average Variance Extracted values

Variables	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Service Accessibility (X3)	0,766	0,783	0,840	0,513
Patient Satisfaction (Y)	0,749	0,751	0,856	0,664
Service quality (X1)	0,750	0,759	0,833	0,502
HR competence (X2)	0,701	0,705	0,817	0,529

Taken from the PLS Model data.

Internal Consistency Reliability measures how capable an indicator can measure its latent construct[43] . The tools used to assess this are composite reliability and Cronbach's alpha. A composite reliability value of 0.6 - 0.7 is considered to have good reliability and the expected Cronbach's alpha value is above 0.7[44] ,

Based on table 3 above, it can be seen that all constructs have a *Cronbach's Alpha* value> 0.6, so it can be said that all these constructs are reliable. For example, *Cronbach's Alpha of* the latent variable Y is 0.749> 0.6, so Y is reliable.

Furthermore, the *path coefficients* between constructs are measured to see the significance and strength of the relationship and also to test the hypothesis. The value of path coefficients ranges from -1 to +1. The closer to +1, the stronger the relationship between the two constructs. A relationship that is closer to -1 indicates that the relationship is negative[44] . The AVE is used to determine the achievement of discriminant validity requirements. The minimum value to state that reliability has been achieved is 0.50, with this data where the AVE is all more than 0.50, it is said that all variables are quite reliable.

The results of the analysis at the inner level are as follows: (T value from loading factor and t value from *path coefficient directs effects*

Below shows the *direct effect* or direct *effect of* each exogenous variable construct on endogenous variables:

Table 4. Path Coefficients

Variables	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Conclusion
Service Accessibility (X3) -> Patient Satisfaction (Y)	0,212	0,216	0,090	2,358	0,019	Accept H1 (Significant)
Service quality (X1) -> Patient satisfaction (Y)	0,248	0,260	0,107	2,320	0,021	Accept H1 (Significant)
HR competence (X2) -> Patient satisfaction (Y)	0,182	0,180	0,088	2,059	0,040	Accept H1 (Significant)

Taken from the Bootstrapping Model data.

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The Original Sample (O) value shows the influence or contribution of the independent variable on the dependent variable. The greater the positive value, the greater the influence on the dependent variable.

The T Statistics (|O/STDEV|) value shows the significance of the effect of the independent variable on the dependent variable, with a critical value of 1.96 at the 95% confidence level. If the T Statistics number> 1.96, it means that the independent variable has an effect on the dependent variable, so Hypothesis 1 (H1) is accepted. So from the data above, it can be concluded that:

a. Service Accessibility (X3) has a positive effect of 0.212 on Patient Satisfaction (Y), with a T Statistics value of 2.358> 1.96 which indicates a significant effect. Therefore, Hypothesis 1 (H1) is accepted or means that service accessibility has a significant influence on patient satisfaction.
b. Service Quality (X1) has a positive effect of 0.248 on Patient Satisfaction (Y), with a T Statistics value of 2.320> 1.96 which indicates a significant effect. Therefore, Hypothesis 1 (H1) is accepted or means that service quality has a significant influence on patient satisfaction.
c. HR competence (X2) has a positive effect of 0.182 on Patient Satisfaction (Y), with a T Statistics value of 2.059> 1.96 which shows a significant effect. Therefore, Hypothesis 1 (H1) is accepted or means that HR competence has a significant influence on patient satisfaction.

4.2 Discussion

4.2.1 The Effect of Service Quality on Patient Satisfaction

The results of this study indicate that the determinants of service quality include reliability in the form of the officer's ability to provide accurate and trustworthy services, responsiveness to respond quickly to patient requests and complaints, service assurance in the form of insight and courtesy of employees who create patient trust, empathy in providing attention to customers, and the appearance of physical facilities, equipment, and medical devices and good communication tools. The better the quality of service provided, the more likely patients are to feel satisfied with their experience at the health facility. High-quality service can build patient trust and satisfaction with the healthcare provider. When patients receive good treatment and adequate care, they are likely to feel satisfied and trust the health facility they visit. High patient satisfaction also contributes to maintaining a good relationship between the patient and the healthcare provider, and influences the patient's decision to return to use the service in the future.

This is in line with the results of Aliman and Mohamad's research which found that service quality has a significant influence on patient satisfaction. The higher the quality of service provided, the higher the customer satisfaction[45] . Likewise, the results of Subedi and Dangol's research on the banking sector in Nepal revealed that service quality has a positive and significant effect on customer satisfaction. Service quality dimensions such as reliability, assurance, and empathy were found to be important predictors of customer satisfaction[46] . These two studies, conducted in different industries and countries, are consistent with the finding that higher service quality contributes positively and significantly to increased customer satisfaction.

To improve service quality, institutions need to strive for continuous improvement. By doing this, it is expected to create a pleasant and satisfying service environment for patients.

This study highlights the importance of improving service quality in PHCs to build a positive image, maintain patient trust, and strengthen their competitive position in the healthcare industry. Based on the findings, it is recommended that PHC management implement a strategy of continuous service quality improvement for both medical and non-medical aspects. This effort is expected to help PHCs maintain high patient satisfaction, increase patient loyalty, and strengthen their competitiveness in the competitive healthcare market. By providing superior services, health centers can strengthen their reputation and build closer relationships with patients and the surrounding community.

4.2.2 The Effect of HR Competence on Patient Satisfaction

The results of this study show that HR competencies, which include medical knowledge and skills, effective communication skills, friendly and professional attitudes, and understanding of patient needs, can increase patient satisfaction. When patients are served by competent and skilled staff, they tend to feel trust and satisfaction with the services received. Conversely, if patients receive services from less competent staff, it may decrease their satisfaction.

The importance of HR competence to patient satisfaction cannot be overlooked. Patients who are served by less competent staff, such as lack of medical knowledge, poor communication skills, or unfriendly attitudes, are likely to feel dissatisfied and lack trust in the services provided. In contrast, when patients are served by competent staff, they will feel more valued, trusting, and satisfied with the experience.

These results are in accordance with previous studies, namely that HR competence is an important factor that influences patient satisfaction in receiving health services.

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In addition, this finding is also similar to the results of a study conducted by Alshahrani et al., who found that medical staff competence has a significant effect on patient satisfaction in Saudi Arabia[47] . Another study by Chandra and Singh also revealed that HR competencies, including technical abilities and interpersonal skills, are positively correlated with patient satisfaction in hospitals in India .[48]

Based on the results of this study, it is important for healthcare providers to improve HR competencies on an ongoing basis. This can be done through training programs, continuing education, and periodic development of staff skills and knowledge. In addition, institutions also need to pay attention to non-technical aspects such as communication skills, empathy, and interpersonal skills of staff in providing services to patients.

By improving HR competencies, it is expected to increase patient trust and satisfaction with the services provided. This in turn can strengthen the competitive position of health service providers and build good relationships with long-term patients.

4.2.3 The Effect of Service Accessibility on Patient Satisfaction

This research shows that service accessibility in the form of the ease felt by patients in reaching and accessing services at the Puskesmas, which is indicated through the ease of reaching the location, distance and travel time, service fees, operating hours of the puskesmas, and ease of obtaining service information affect patient satisfaction.

These results are consistent with previous studies which reveal that service accessibility is an important factor affecting patient satisfaction. Service accessibility includes the ease of reaching health facilities, the availability of services when needed, and the ease of obtaining information related to available services. When patients can access services easily, they tend to feel satisfied with the experience obtained. Conversely, if patients experience difficulties in accessing services, it may decrease their satisfaction . [49]

The importance of service accessibility to patient satisfaction cannot be overlooked. Patients who experience difficulties in accessing health services, such as long distances, long waiting times, or lack of information, are likely to feel frustrated and dissatisfied with the services provided[49] . On the contrary, when patients can easily access the services they need, they will feel more valued and well accommodated, thus increasing their satisfaction.

This finding is in line with research which states that service accessibility has a significant positive influence on patient satisfaction in hospitals. Another study by also found that service accessibility is one of the important factors affecting patient satisfaction in health facilities[50] . Based on the results of this study, it is important for healthcare providers to ensure good accessibility for patients. This can be done by increasing service availability, expanding service coverage, and providing clear and accessible information regarding the services offered. By improving service accessibility, it is expected to increase patient satisfaction and strengthen the competitive position of health service providers.

5 Conclusion

Service quality is proven to have a significant influence on patient satisfaction. The determinants of service quality such as reliability, responsiveness, trust, empathy, and good physical evidence contribute to increasing patient satisfaction.

Human resource competence (HR) has a significant influence on patient satisfaction Knowledge, technical skills, communication skills, friendly attitude and service behavior are important factors in determining patient satisfaction.

Service accessibility is proven to have a significant influence on patient satisfaction. Strategic service location, availability of public transportation facilities, affordable service fees, service time, ease of obtaining service information are important factors in determining patient satisfaction.

This study has several limitations. First, it only focused on three main factors that affect patient satisfaction, namely service accessibility, service quality, and HR competency, while ignoring other factors such as patient demographic characteristics. Second, the study sample was limited to patients at one particular health facility, so the results may not be generalizable to other facilities or regions. Third, data collection through self-reported questionnaires has the potential to cause response bias due to subjective perceptions of respondents. Fourth, cross-sectional designs only capture perceptions at one specific time, whereas longitudinal studies can provide a more comprehensive perspective on changes in satisfaction over time. Finally, although efforts to minimize plagiarism have been made, there is still the possibility of unidentified similarities with other studies. By recognizing these limitations, the research results can be interpreted more wisely and serve as a reference for further research in the future.

Health service providers need to improve service accessibility by expanding service availability, facilitating access to information, and ensuring services are available when patients need them. Continuous service quality improvement efforts should also be made, covering both medical and non-medical aspects such as improving staff

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competence, responsiveness, communication with patients, and improving physical facilities. HR competency development should be a priority, including training programs, continuing education, and improvement of technical and non-technical skills such as communication and empathy for staff. Periodic evaluation of patient satisfaction should be conducted to identify areas that require improvement, and follow up on any complaints or feedback from patients to improve the overall quality of health services.

To improve the generalizability of the results, the scope of the study needs to be expanded to include other health facilities in different geographical areas. Other factors that may affect patient satisfaction, such as patient demographic characteristics, also need to be considered in future research models. In addition, the use of more diverse data collection methods, such as direct observation and in-depth interviews, may reduce the bias of the self-reported method used in previous studies.

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