

# The relationship between service quality and effective communication with patient satisfaction in the outpatient installation of Tangerang City Hospital

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## ABSTRACT

Patient satisfaction is a key indicator of the standard of a health facility. Hospitals must be able to provide quality services supported by medical personnel who have competence in the form of effective communication skills. Analyze the relationship between service quality and effective communication with patient satisfaction at the Outpatient Installation of Tangerang City General Hospital. Quantitative method with descriptive research design and cross sectional approach. The sample used was 337 patients, the sampling technique in this study used non probability sampling with a purposive sampling approach. Bivariate data analysis in this study used chi square, while multivariate analysis with multiple logistic regression tests. The results showed that 54.0% of the service quality was good, 49.6% of communication was effective and 58.8% were satisfied with the service at the Tangerang City Hospital Outpatient Installation. All dimensions in the quality of service have a poor presentation of almost 50%. Likewise, the dimension of effective communication has a 50% less effective presentation. The quality of service and effective communication are simultaneously related to patient satisfaction. The most dominant variable related to patient satisfaction in the Outpatient Installation of Tangerang City Hospital was effective communication with an *p* value of 0.003 and an OR value of 2.120 (95% CI 1.295-3.470). Service quality and effective communication are associated with patient satisfaction at the Outpatient Installation of Tangerang City General Hospital. Improve responsiveness in the form of response to patient complaints, certainty of service time clearly informed to patients, assurance of reliable medical personnel and empathy to patients, and improve the quality of communication effectively.

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## INTRODUCTION

SystemHealth services are an important element in improving the health and well-being of every person throughout the world.(ROHMADONI, 2021),(Michael, 2020). In Indonesia, everyone has the same rights to obtain health services and the government is responsible for the availability of all forms of safe, quality, efficient and affordable health efforts for all levels of society in accordance with Article 3 of Law No. 17 of 2023. One of these efforts is by increasing the availability and equal distribution of health service facilities such as hospitals in each region (Afdilla, 2023).

In an effort to accelerate the increase in degreeIndonesian public health, the role of hospitals is very strategic as a public service facility (Khainuddin et al., 2019),(Mentari et al., 2023). The new paradigm of health services requires hospitals to provide quality services according to the needs and desires of patients while still referring to the professional and medical code of ethics. Hospitals are required to maintain andimprove the quality of its services both in terms of curative, preventive and promotive so that consumer trust and satisfaction increase. This is stated in the Regulation of the Minister of Health number 33 of 2019 article 3 which states that public health services including hospitals must be able to create satisfaction of service recipients and prevent complaints from service recipients, which can be achieved through consistent implementation of quality service activities, according to existing guidelines (Ministry of Health, 2019).

Patient satisfaction is the main indicator of the standard of a health facility. The measure of service quality where low patient satisfaction will impact the number of visits that will affect the profitability of the hospital. The problem that occurs is that patient satisfaction is subjective (Suciati & Zaman, 2023),(Fanny, 2022). Each person from the background they have, can have a different level of satisfaction for the same quality of health services. The satisfaction felt by patients depends on their perception of the expectations and quality of services provided by the hospital. If the quality of service received is the same or greater than the customer's expectations, then the consumer is satisfied. Likewise, if the quality of service received is less than expected, then the patient will feel less satisfied (Harfika, 2017).

Hospitals must be able to meet patient satisfaction by providing the highest quality of service so that it can meet or even exceed patient expectations. Patient satisfaction is the main indicator of the standard of a health facility. The measure of service quality where low patient satisfaction will have an impact on the number of visits which will affect the profitability of the hospital. In addition, the high competitiveness between hospitals causes problems for hospitals as providers of health services, so hospitals must maintain consumer trust with improved service quality so that consumer satisfaction increases (Harfika, 2017).

Quality issues are often discussed in everyday life, in general quality contains many meanings and definitions. Service quality can be known by assessing the satisfaction rate of service users, where good service quality is when the goods or services provided by the producer are in accordance with what the customer wants. Providing quality health services is not an easy task for hospital managers, because health services are related to quality of life. If there is an error in the form of information or speed of patient treatment, it may cause one bad effect, including worsening of the patient's illness, the emergence of disability and even death, which results in the emergence of patient complaints. Assessment of service quality in hospitals is an important reference for improving health services so that patient satisfaction and patient loyalty are created (Sari, 2018).

Study Duc Thanh et al. (2022) entitled*Patient Satisfaction With Healthcare Service Quality and Its Associated Factors at One Polyclinic in Hanoi, Vietnam*stated that providing health services to satisfy customers/patients is the key that influences the existence and development of a health facility. Other research from Alibrandi et al., (2023) entitled*Patient Satisfaction and Quality of Hospital Care at the Polyclinic hospital in Messina, Sicily, Southern Italy* stated that important factors in determining higher satisfaction for patients are the availability of quality services that support especially the competence and professionalism of doctors, as well as the availability of hospital

facilities such as parking, cleanliness and good building conditions. Research Death (2024) entitled *The Influence of Service Quality on Patient Satisfaction at YPK Mandiri Hospital, Central Jakarta*, states that hospitals as health service facilities must provide quality services so that they can improve the quality of their services. The health service system continues to change and improve, so it is necessary to find a way to assess work results while evaluating the satisfaction of service recipients, both patients and patient families.

In general, patients who are dissatisfied with the services they receive will file a complaint with the hospital. If the complaint is not handled immediately, it will result in decreased patient satisfaction with the capabilities of health services in the hospital. Poor service in a hospital will give a bad perception of the hospital and they will not come to the hospital again and tell their family or the surrounding environment about their perception of the services they receive, so this can make the hospital unpopular and give a bad impression. Therefore, communication is one of the main supporting factors for hospital services, in expressing its role and function (Fanny, 2022).

Communication is something that is inseparable from daily health service activities, because it is the most effective way to help health workers carry out their roles and functions properly. Communication is one of the most important things for patients to be able to understand their health conditions, problems and treatment planning. Trust between patients and health professionals can be built through good communication (Earth, 2022).

One of the standards of patient satisfaction is seen from effective communication that can be received by the patient. Effective communication is an activity of sending meaning (messages) from one individual to another where the activity can produce benefits for both parties. PHospital staff must have competencies in the form of the ability to communicate effectively and easily understood in providing community services. The ability to communicate will underlie efforts to solve problems, facilitate the provision of assistance, both in medical and psychological services (Fanny, 2022).

Research conducted by Ulya (2023) entitled *The relationship between nurse communication and the level of satisfaction of outpatient health services in the Bojong Health Center general polyclinic*, the results showed that there was a relationship between nurse communication and the level of satisfaction of patient health services with a p value of 0.000 ( $p < \alpha 0.05$ ). This is further strengthened by previous research conducted by Rusnoto (2019) entitled *The relationship between communication and nursing services with patient satisfaction levels*, the results obtained were that there was a significant relationship between communication and patient satisfaction with a p value of 0.001 ( $p < \alpha 0.05$ ).

Law of the Republic of Indonesia Number 17 of 2023 Article 1 states that a Hospital is a health service institution that provides comprehensive individual health services that provide inpatient, outpatient, and emergency services. A hospital is a health system consisting of subsystems that are able to provide the community with the best health services. Permenkes No. 66/Menkes/II/1987 states that outpatient care is a service for people who enter a hospital for the purposes of observation, diagnosis, treatment, medical rehabilitation, and other health services without staying in an inpatient room. In terms of service, outpatient care is provided in the outpatient functional implementation unit consisting of general polyclinics and specialist polyclinics (Kumparan, 2022).

*World Health Organization* (WHO) in 2021 showed data on the level of patient satisfaction in hospitals in various countries consisting of more than 6 million patient inputs in health care in 25 countries. The highest level of patient satisfaction is in Sweden with a satisfaction index reaching 92.37%, Finland (91.92%), Norway (90.75%), USA (89.33%), Denmark (89.29%), while the lowest level of patient satisfaction is Kenya (40.4) and India (34.4%) (WHO, 2021). Regulation of the Ministry of Health of the Republic of Indonesia in 2008 concerning Minimum Service Standards for patient satisfaction is  $> 90\%$ . If health services are found with a patient satisfaction level below 90%, then the health services provided are considered not to meet minimum standards or are not

of good quality. Meanwhile, according to research Life (2022) Several research results show data on patient satisfaction levels in Indonesia showing that patient satisfaction figures only reached 42.8%.

One of the hospitals in Indonesia that always implements quality service to the community is the Tangerang City Regional General Hospital. This hospital is one of the Technical Implementation Units (UPT) under the Tangerang City Health Office. The Tangerang City Regional General Hospital was established as an effort by the Tangerang City Regional Government to provide comprehensive health services to the community, with the main objective of providing complete individual health services. The standards used in the development of Tangerang City Regional General Hospital services are based on Type C hospital standards. Outpatient installations at the Tangerang City Regional General Hospital have 4 basic specialist fields and 8 additional specialist fields, with a total of 33 polyclinics.

Medical record data from Tangerang City Hospital from January to March 2024 recorded an average of 1,000 new outpatients 2,120 patients each month. With the highest number of visits in January 2024 reaching 2,235 new outpatients. The large number of patients who must be served every day certainly creates its own problems. There are several patients who are dissatisfied with the services provided by the outpatient unit of the Tangerang City Hospital (Tangerang City Hospital, 2024).

Patients usually complain about their dissatisfaction by talking directly to the Outpatient Installation nurse, to the public relations and some write on social media. From the survey data that serves patients in the Outpatient Installation, there are around less than 2 patients every day who complain regarding the quality of services provided such as nurses who are not friendly or doctors or nurses who communicate less with patients who are not informative. Communication takes place as minimally as possible when the nurse enters the patient's room to perform the action.

A preliminary study in the form of interviews with 15 new outpatients, obtained results 8 patients complained about the lack of friendliness of officers, service information that is not well understood by patients, the attitude of officers in receiving complaints from patients. While from the quality of service provided there were 6 patients who said that facilities such as waiting chairs that were not comparable in number compared to the number of visitors made some of the patient escorts have to stand and some chairs were damaged, the AC in the polyclinic room was leaking. The condition of the vehicle parking area, especially four-wheeled vehicles, which is often full, makes it difficult for outpatients to park their vehicles.

With the phenomenon of complaints from patients regarding the quality of service and communication between nursing staff and doctors in the outpatient room, the author is interested in conducting research on "The Relationship between Service Quality and Effective Communication with Patient Satisfaction in the Outpatient Installation of Tangerang City Hospital".

## RESEARCH METHOD

### Types and Design of Research

Research design is the whole planning to answer research questions and anticipate some difficulties that arise during the research process, this is important because research design is a strategy to obtain the data needed for the purposes of testing hypotheses or to answer research questions and as a tool to control variables that influence research (Sugiyono, 2016).

This study uses a quantitative method with a descriptive research design and a cross-sectional approach, namely a type of research that emphasizes the time of measurement / observation of independent variable data (independent) and dependent variables (dependent) only once at one time. In this type of design, independent and dependent variables are assessed simultaneously at one time (Nursalam, 2016).

### Place and Time of Research

The research was conducted at the Outpatient Installation of the Tangerang City Regional General Hospital. The research was conducted from June 2024.

### Population and Sample

- Research population, PPopulation is a generalization area consisting of objects/subjects that have certain qualities and characteristics that are determined by the researcher to be studied and then conclusions are drawn (Sugiyono, 2016). The population in this study is The average number of new outpatients is 2,120 patients per month.
- Research Sample, a sample is a portion taken from the entire object being studied and is considered to represent the entire population (Notoatmojo, 2015). The sample in this study was new patients who visited the outpatient installation of Tangerang City Hospital. The number of samples taken in this study was determined using calculations based on Slovin's calculations, as follows:

$$n = \frac{N}{N.d^2 + 1}$$

Source: (Sugiyono, 2016)

Information:

N : amount *sample*

N : population size

d<sup>2</sup> : precision (set) 5%, with a confidence level of 95%)

$$n = \frac{2120}{N.d^2 + 1}$$

$$n = \frac{2120}{(2120).(0,05)^2 + 1}$$

$$n = \frac{2120}{(2120).(0,0025) + 1}$$

$$n = \frac{2120}{5,3 + 1}$$

$$n = \frac{2120}{6,3} = 336,5 = 337$$

Based on the calculation, it is known that the minimum sample size is 337 new patients. The researcher anticipates that if there is incomplete data, then to prevent drop out, the researcher makes a drop out calculation of 10% of the total sample, namely from 337 new patients, then 10% x 337 = 34 new patients. So the sample taken by the researcher is 337 new patients plus 34 new patients as a reserve, to avoid errors. So the number of research samples is 371 new patients

### Data collection

- Research instruments, research instruments are all tools used to collect, examine, investigate a problem, or collect, process, analyze and present data systematically and objectively with the aim of solving a problem or testing a hypothesis.

The measuring instrument used in this study was a questionnaire sheet Sugiyono (2016) said that a questionnaire is a data collection technique carried out by giving a set of written questions or statements to respondents to answer.

- Validity, is an index that shows that the measuring instrument actually measures what is being measured. The goal is to determine the extent to which the measuring instrument is accurate in measuring the results (Notoatmodjo, 2015). In this study, the validity of the questionnaire was tested on 30 respondents who were not used in this study at the outpatient installation of Tangerang City Hospital. The validity test was conducted to determine whether

the items presented in the questionnaire were truly able to express with certainty what would be studied.

- c. Reliability, after measuring validity, it is necessary to measure data reliability, whether the measuring instrument can be used or not (Hidayat, 2017). Reliability is an index that shows the extent to which a measuring instrument can be relied upon or trusted. This means that the measurement results will remain consistent if measurements are taken twice or more with the same symptoms using the same measuring instrument (Notoatmodjo, 2022). Testing reliability using the Cronbach alpha method.

## RESULTS AND DISCUSSIONS

### Research result

#### Research Site Overview

Tangerang City Regional General Hospital is one of the Technical Implementation Units (UPT) under the Tangerang City Health Office. Tangerang City Regional General Hospital was established as an effort by the Tangerang City Regional Government to provide comprehensive health services to the community, with the main objective of providing complete individual health services. Tangerang City Regional General Hospital has a bed capacity of 230 which is implemented according to the situation and conditions of the hospital.

Tangerang City Hospital stands on 14,000 m2 of land with a building area of 23,743 m2 and a building height of 8 floors. The facilities provided consist of Emergency Installation, outpatient with 4 basic specialist fields and 24 other specialist fields, inpatient installation, HCU, ICU, PICU, NICU, OK, VK, Hemodialysis, Radiology, Laboratory, Pharmacy, Medical Rehabilitation, Mortuary, workshop, kitchen, laundry, CSSD, IPAL, administration room, medical record room and security room.

Tangerang City Regional General Hospital was established based on Tangerang City Regulation No. 12 of 2012 as a follow-up effort by the Regional Government in providing comprehensive health services to the people of Tangerang City, which aims to provide complete individual health services. We continue to develop services at the Tangerang City Regional General Hospital to provide the best service for the people of Tangerang City. Currently, the Tangerang City Regional General Hospital is a Type C Hospital that has been Fully Accredited in May 2017. Providing services with LOVE (Fast, Innovative, Comfortable, Right, Accurate) to the community, it is hoped that the Tangerang City Regional General Hospital will become one of the Hospitals of choice for the community that is Comfortable, Affordable and Trusted

### Results

#### Univariate Analysis

**Table 1.** Frequency distribution according to respondent characteristics (gender, age, education) in the outpatient installation of Tangerang City Hospital in 2024 (n=337)

	Characteristics Respondents	Amount	
		n	Percentage (%)
Gender	Woman	219	65.0
	Man	118	35.0
Age	≤ 35 years	139	41.2
	>35 years	198	58.8
Education	Low Education	100	29.7
	higher education	237	70.3

Table 1, Shows the distribution of respondents according to variable characteristics. Based on the gender variable, it is known that there are more female respondents, namely 219 people (65.0%), while there are 118 male respondents (35.0%). For the age variable, most respondents are >35 years old, namely 198 people (58.8%), while those aged ≤35 years are 139 people (41.2%). In

terms of education level, the largest respondents are highly educated (high school and college) as many as 237 people (70.3%), while those with low education (no school, elementary and junior high school) are 100 people (29.7%).

**Table 2.** Frequency distribution according to the variables of service quality, effective communication and patient satisfaction at the outpatient installation of Tangerang City Hospital in 2024 (n=337)

	Variables	Amount	
		n	Percentage (%)
Quality of Service			
<i>Tangible</i>	Good	186	55.2
	Not good	151	44.8
<i>Reliable</i>	Good	189	56.1
	Not good	148	43.9
<i>Responsiveness</i>	Good	169	50.1
	Not good	168	49.9
<i>Assurance</i>	Good	175	51.9
	Not good	162	48.1
<i>Empathy</i>	Good	188	55.8
	Not good	149	44.2
Quality of Service	Good	182	54.0
	Not good	155	46.0
Effective Communication			
<i>Respect</i>	Effective	171	50.7
	Ineffective	166	49.3
<i>Empathy</i>	Effective	170	50.4
	Ineffective	167	49.6
<i>Audible</i>	Effective	186	55.2
	Ineffective	151	44.8
<i>Clarity</i>	Effective	168	49.9
	Ineffective	169	50.1
<i>Humble</i>	Effective	151	44.8
	Ineffective	186	55.2
Effective Communication	Effective	167	49.6
	Ineffective	170	50.4
Patient Satisfaction			
Patient Satisfaction	Satisfied	198	58.8
	Not satisfied	139	41.2

From Table 2, the service quality variables in the outpatient installation of Tangerang City Hospital, most respondents stated that it was good, as seen from the tangible results of 186 people (55.2%), reliable of 189 people (56.1%), responsiveness of 169 people (50.1%), assurance of 175 people (51.9%), empathy of 188 people (55.8%). Overall, the service quality variables, most respondents stated that it was good, 182 people (54.0%).

The effective communication variables mostly stated that it was effective, with the following results: respect for 171 people (50.7%), empathy for 170 people (50.7%), and respect for 171 people (50.7%). People (50.4%), audible as many as 186 people (55.2%). clarity as many as 168 people (49.9%), and humble as many as 151 people (44.8%). Overall, the effective communication variable, most respondents stated that it was ineffective as many as 170 people (50.4%).

In the patient satisfaction variable, it is known that the majority stated that they were satisfied with the services provided, as many as 198 people (58.8%), while those who were dissatisfied were 139 people (41.2%).

### Bivariate Analysis

Bivariate analysis was conducted to determine the relationship between dependent and independent variables. The following are the results of bivariate analysis in this study, namely:

**Table 3.** Results of analysis of the relationship between service quality, effective communication, and respondent characteristics (gender, age, education) with patient satisfaction at the outpatient installation of Tangerang City Hospital, 2024 (n=337)

Variables	Patient Satisfaction				P-Value	OR	95% CI
	Satisfied		Not satisfied				
	n	%	n	%			
Quality Service							
Good	125	68.7%	57	31.3%	0,000	2,463	1,579-3,842
Not good	73	47.1%	85	52.9%			
Communication Effective							
Effective	118	70.7%	49	29.3%	0,000	2,709	1,729-4,245
Ineffective	80	47.1%	90	52.9%			
Gender							
Woman	48	48.0%	52	52.0%	0.013	1,868	1,164-2,997
Man	150	63.3%	87	36.7%			
Variables	Patient Satisfaction				P-Value	OR	95% CI
	Satisfied		Not satisfied				
	n	%	n	%			
Age							
≤ 35 Years	77	55.4%	62	44.6%	0.349	1,265	0.815-1.964
> 35 Years	121	61.1%	77	39.9%			
Education							
Low	48	48.0%	52	52.0%	0.013	1,868	1,164-2,997
Tall	150	63.3%	87	36.7%			

Table 3 Results of the analysis of the relationship between service quality and patient satisfaction at the Outpatient Installation of Tangerang City Hospital obtained statistical test results showing that patient satisfaction who were satisfied was higher in good service quality by 68.7% (125) compared to poor service quality by 47.1% (73), while patient satisfaction who were less satisfied was higher in poor service quality by 52.9% (85) compared to good service quality 31.3% (57). The results of the statistical test of service quality showed a p value of 0.000 <0.05, which means that there is a significant relationship between service quality and patient satisfaction at the Outpatient Installation of Tangerang City Hospital. The results of the statistical test of service quality showed an OR of 2.463 (CI 95% 1.579-3.842), which means that patients who stated that service quality was good were 2.463 times more likely to be satisfied than patients who stated that service quality was poor.

The results of the analysis of the relationship between effective communication and patient satisfaction at the Outpatient Installation of Tangerang City Hospital obtained statistical test results showing that patient satisfaction who were satisfied was higher in effective communication by 70.7% (118) compared to ineffective communication 47.1% (80). While the satisfaction of dissatisfied patients was higher in ineffective communication 52.9% (90) compared to effective communication 29.3% (49). The results of the statistical test of effective communication showed a p value of 0.000 <0.05, which means that there is a significant relationship between effective communication and patient satisfaction at the Outpatient Installation of Tangerang City Hospital. The results of the statistical test of effective communication showed an OR of 2.709 (CI 95% 1.729-4.245) which means that patients who stated that communication was effective were 2.709 times more likely to be satisfied than patients who stated that communication was ineffective.

The results of the analysis of the relationship between respondent characteristics and patient satisfaction at the Outpatient Installation of Tangerang City Hospital obtained the results of the statistical test of gender showing that the satisfaction of satisfied patients was higher in women

as much as 9.8% (131) compared to men as much as 56.8% (67). While the satisfaction of dissatisfied patients was higher in men as much as 43.2% (51) compared to women 40.2% (88). The results of the statistical test of gender showed a p value of  $0.671 > 0.05$  which means that there is no significant relationship between the gender of respondents and patient satisfaction at the Outpatient Installation of Tangerang City Hospital.

The results of the age statistical test showed that the satisfaction of satisfied patients was higher at age  $> 35$  years as much as 61.1% (121) compared to age  $\leq 35$  years as much as 55.4% (77). While the satisfaction of dissatisfied patients was higher at age  $\leq 35$  years as much as 44.6% (62) compared to age  $> 35$  years 39.9% (77). The results of the age statistical test showed a p value of  $0.349 > 0.05$  which means there is no significant relationship between the age of respondents and patient satisfaction at the Outpatient Installation of Tangerang City Hospital.

The results of the statistical test of education showed that the satisfaction of satisfied patients was higher in higher education as much as 63.3% (150) compared to lower education as much as 48.0% (48). Meanwhile, the satisfaction of dissatisfied patients was higher in lower education as much as 52.0% (52) compared to higher education as much as 36.7% (87). The results of the statistical test of education showed a p value of  $0.013 < 0.05$ , which means that there is a significant relationship between respondent education and patient satisfaction at the Outpatient Installation of Tangerang City Hospital with OR 1.868 (CI 95% 1.164-2.997) which means that higher education has a 1.868 times greater chance of stating satisfaction compared to lower education.

### Multivariate Analysis

Multivariate analysis is conducted to determine the relationship between several independent variables with dependent variables that are conducted simultaneously by controlling them with the influence of variables that are suspected as confounding. The multivariate analysis used in this study is multiple logistic regression of the determinant model, which aims to estimate the relationship between patient satisfaction variables and independent variables that are predicted to be the cause of an incident. The stages in conducting multivariate analysis are as follows

- a. Multivariate Analysis of the Relationship between Service Quality and Effective Communication with Patient Satisfaction at the Outpatient Installation of Tangerang City Hospital

At this initial stage, what is done in this analysis is to compile an initial model that includes independent variables that have a p value  $< 0.25$ .

**Table 4.** Bivariate selection results of the relationship between service quality, effective communication, and respondent characteristics (gender, age, education) with patient satisfaction

Variables	P value	Results
Gender	0.589	Not Entered Multivariable
Age	0.294	Not Entered Multivariable
Education	0.009	Multivariable Entry
Quality of Service	0,000	Multivariable Entry
Effective Communication	0,000	Multivariable Entry

From Table 4, it is known that the independent variables that have a p value  $< 0.25$  are education, service quality and effective communication to be included in the multivariate analysis through multiple logistic regression tests. While the gender and age variables are not included in the multivariate because they have a p value  $> 0.25$ .

### Multiple Logistic Regression Multivariate Modeling

The next stage is to simplify the model through the confounding test, namely by looking at the change in OR value by reducing / eliminating potential confounding variables whose influence is not too large, starting from those with the largest p value  $> 0.05$  one by one. From the initial modeling results of the analysis, the results are obtained in the following table:

**Table 5.** Initial modeling of the relationship between service quality, effective communication, education and patient satisfaction in the outpatient installation of Tangerang City Hospital in 2024 (n=337)

Variables	P-value	OR	CI: 95%
Education	0.114	1,493	0.909-2.455
Quality of Service	0.030	1,731	1,055-2,840
Effective Communication	0.005	2,026	1,231-3,332

The next step is to eliminate/selection of variables whose p value is > 0.05. From the first modeling, the variable that has a p value > 0.05 is education. Elimination is done by removing the education variable from the model.

**Table 6.** Changes in or before and after the education variable was removed

Variables	OR Before	OR After	Percentage OR Changes
Education	1,493		
Quality of Service	1,731	1,807	4.37
Effective Communication	2,026	2,120	4.66

Based on Table 6, after the education variable was removed, it can be seen that no other variables experienced a change in OR of more than 10%, so education was removed because it was not a confounding factor, then the final modeling was carried out.

**Table 7.** Final modeling of the relationship between service quality, effective communication and patient satisfaction at the outpatient installation of Tangerang City Hospital in 2024 (n=337)

Variables	P-value	OR	CI: 95%
Quality of Service	0.018	1,807	1,106-2,950
Effective Communication	0.003	2,120	1,295-3,470

From table 7 multivariate analysis, the results of service quality and effective communication are simultaneously related to patient satisfaction. The most dominant variable related to patient satisfaction in the Outpatient Installation of Tangerang City Hospital is effective communication with a p value of 0.003 and an OR value of 2.120 (CI 95% 1.295-3.470), meaning that effective communication after being controlled by the service quality variable causes respondents to feel satisfied 2.120 times compared to ineffective communication.

**Research Limitations**

In this research process, there are several limitations experienced by researchers, including with different backgrounds, many respondents still do not understand how to fill out the questionnaire, so researchers must always accompany them in the filling process one by one. The subjectivity of each respondent in filling out the questionnaire is different so that the honesty of respondents in filling out the questionnaire affects the results of the research questionnaire.

**Discussion**

**a. Gender**

Based on the results of research from 337 new patients (respondents) at the Outpatient Installation of Tangerang City Hospital, it shows that the majority of respondents were female, as many as 219 people (65.0%). This is in line with research The Greatest Showman (2021) entitled Factors Related to Patient Satisfaction in the Emergency Room of Panti Rapih Hospital Yogyakarta, from the univariate results obtained from 75 patient respondents, 42 people (56%) were female.

The Last Supper (2016) States that chronic diseases are more common in women than in men. Women are at greater risk of getting sick than men, and are also prone to a decrease in their immune system. Women's busy activities at home and their role as housewives make them work harder than men. Many do not realize that women's housework and childcare are not as easy as

they look and are not easy. This job can even be said to be able to drain energy and make women susceptible to a decrease in their immune system, fatigue and illness.

According to the researcher's analysis, both men and women have definitely felt pain, and have the same chance of being hospitalized. It's just that women have been known to be easier to go to the doctor than men who need to be forced to check themselves, so that the impression arises that women care more about their health conditions than men. A man often doesn't want to bother with the pain he actually suffers, they just endure the pain by continuing their daily activities.

#### **b. Age**

Based on the results of research from 337 new patients (respondents) at the Outpatient Installation of Tangerang City Hospital, it shows that most respondents are >35 years old, as many as 198 people (58.8%). This is in line with research Hasbi et al. (2023) entitled The Relationship between Quality of Nursing Services and Patient Satisfaction Levels in the Intensive Care Unit (ICU) of RSD dr. H. Soemarno Sosroatmodjo Tanjung Selor from the results of his research obtained that out of 35 respondents, 21 people (60%) were aged >35 years.

The Primitive (2016) said that age is closely related to the level of maturity, a more mature person tends to have skills and abilities and achievements than those below their age. A person over the age of 35 is included in the productive age group, who will also enter the early elderly stage and of course already have extensive knowledge and habits that have been formed that can influence behavior. Habits that have been formed at this age because at this age they have independently adjusted to life and social expectations that make this age group have strong habits in their daily behavior.

According to the researcher's analysis, the age of over 35 years is a group of individuals who have been able to adjust independently to life and social expectations, so that people of this adult age have the calmest emotions, are most able to control themselves, and are most responsible. Someone with an age of >35 years is able to solve their problems well and is emotionally stable. Patients with an age of >35 years are certainly able to think and act on themselves, including those related to personal health, administration and treatment in hospitals.

#### **c. Education**

Based on the results of research from 337 new patients (respondents) at the Outpatient Installation of Tangerang City Hospital, it shows that the majority respondents with higher education (high school and college) as many as 237 people (70.3%). This is in line with research Rusnoto (2019) entitled The Relationship between Communication and Nursing Services with the Level of Satisfaction at Dr. Loekmono Hadi Kudus Regional Hospital. From the results of the research, it was found that out of 90 respondents, 33 people (36.7%) had high school and college education.

Darsini (2019) said that a person's knowledge is influenced by their level of education, in general, the higher a person's education, the easier it will be for them to receive information. Education plays an important role for someone in obtaining information and insight. Individuals who have higher education will think more critically and rationally about the services received. So the higher a person's education, the better their mindset.

According to the researcher's analysis, having a good educational background will make respondents better at receiving information provided by health workers. Respondents understand what obligations must be fulfilled to be able to receive outpatient treatment at Tangerang City Hospital, know the doctor's practice schedule and registration procedures. On the other hand, respondents with low educational backgrounds who only have junior high school or even elementary school education will find it difficult to understand the information conveyed by the officers to them. The large number of patients with high school and college education is because currently many people understand the importance of basic education up to high school before they decide to work or continue their studies.

#### d. Quality of Service

Based on the results of a study of 337 new patients (respondents) at the Outpatient Installation of Tangerang City Hospital, it shows that most respondents stated that the quality of service was good, as many as 182 people (54%), consisting of tangible dimensions as many as 186 people (55.2%), reliable as many as 189 people (56.1%), responsiveness as many as 169 people (50.1%), assurance as many as 175 people (51.9%) and empathy as many as 188 people (55.8%). This is in line with the research Rose (2017) entitled *The Relationship between the Quality of Hospital Health Services and the Level of Satisfaction of Inpatients*. From the results of the research, it was found that out of 30 respondents, 22 people (73.3%) stated that the quality of service at the hospital was good.

Service is one of the efforts that can be used as a basis for making a difference with other hospitals. The form of service provided can differ between hospitals. By getting good quality service during treatment at the hospital, it will certainly create a good impression, feeling and image for patients and families regarding the service. Excellent service quality will result in the public as potential consumers, and also existing consumers, giving a good response to the hospital, and conversely, if the quality of service received by consumers is not good, this can result in the public's impression of the hospital getting worse. (Nafisa & Sukresna, 2018).

According to the researcher's analysis that the ability of hospitals to provide professional services to consumers in this case patients is a non-negotiable demand. With the enactment of Law No. 8 of 1999 concerning consumer protection, consumers must be treated or served properly and honestly, without discrimination, and to be heard for their opinions and complaints regarding the goods and/or services they use. Service quality plays an important role in nursing care services in hospitals. From the research results, patients were still found to state poor service quality (38.3%) this needs to get attention from the management to immediately make improvements to the deficiencies found. Tangerang City Hospital must be able to improve responsiveness in the form of responses to patient complaints, both those complained about directly and complaints submitted online. Providing certainty of service time to be clearly informed to patients, as well as certainty of the presence of doctors who come on time and guarantees of reliable medical personnel and empathy for patients.

#### e. Effective Communication

Based on the results of a study of 337 new patients (respondents) at the Outpatient Installation of Tangerang City Hospital, it shows that most respondents stated that health worker communication was ineffective as many as 170 people (50.4%), consisting of the dimensions of effective respect as many as 171 people (50.7%), effective empathy as many as 170 people (50.4%), effective audile as many as 186 people (55.2%), less effective clarity as many as 169 people (50.1%) and less effective humble as many as 186 people (55.2%). This is in line with the study Juliana (2020) entitled *Perception of Effective Communication of Nurses with Patient Satisfaction in the Inpatient Installation of Petala Bumi Regional Hospital, Riau Province*. From the results of his research, it was found that out of 100 respondents who divided the effective communication variable into 4 dimensions, 67 people (67%) stated that the empathy dimension in the hospital was high, 51 people (51%) stated that the clarity dimension in the hospital was high, 52 people (52%) stated that the humble dimension in the hospital was high, and 75 people (75%) stated that the respect dimension in the hospital was high.

The implementation of nursing and medical care requires effective communication. Communication is a process of transferring information from one or a group of people to another or a group of people using certain symbols so as to have an influence. Effective communication of health workers is very much needed in handling patients, if it is not implemented properly it will disrupt the relationship that has an impact on the service process to patients. Lack of

communication between hospital staff and patients is one of the reasons for common complaints from patients in hospitals.

According to the researcher's analysis, effective communication between health workers and patients is the key to accurate and earlier treatment and diagnosis in patients. Good communication will have an impact on reducing the number of complaints about hospital services, because from the results of the study, some patients complained about hospital services not because the ability of the medical staff was lacking but because they felt they were not being cared for. Health workers should be willing to listen well and not show a hasty attitude.

#### **f. Patient Satisfaction**

Based on the results of research from 337 new patients (respondents) at the Outpatient Installation of Tangerang City Hospital, it shows that the majority of respondents stated that they were satisfied, as many as 198 people (58.8%). This is in line with research Salamah (2020) entitled Overview of Patient Satisfaction Levels Regarding Services at the Emergency Room of PKU Muhammadiyah Gombong Hospital. From the results of the research, it was found that out of 30 respondents, 25 people (83.3%) stated that they were satisfied with the services provided.

Satisfaction is something that is very valuable to maintain the existence of consumers as a business or company runs. Good service will spur whether or not a consumer is satisfied with the service provided. Level of patient satisfaction arising from the nursing services provided means that the reality obtained by the patient is in accordance with or exceeds the expectations they wish to receive. They will convey their satisfaction with the quality of service they feel at the hospital to other people, so that patient loyalty will be formed in the form of not turning to other hospitals for treatment, and even recommending it to friends or neighbors. (Mufrizal, 2021).

According to the researcher's analysis, patients feel satisfied when they get and feel the value/comfort value of the products and services they receive which are provided by service providers with competitive values. So this creates the value of a hospital marketing attribute as a stimulus element to influence patients in receiving services. Improvement of quality and facilities Medical and non-medical services influence the impression that arises in the patient's mind, all of which lead to patient satisfaction. If the service is able to fulfill the needs and desires of the patient and is able to provide satisfaction, then there will automatically be a repeat, and even further, they will convey their satisfaction to other people, either in the form of stories (word of mouth) or providing recommendations.

#### **g. Relationship between Service Quality and Patient Satisfaction**

Based on the results of a statistical test on the relationship between service quality and patient satisfaction obtained results that there is a significant relationship between service quality and patient satisfaction with a  $p$  value of  $0.000 < 0.05$ . The results of the study also obtained results that all dimensions of service quality, namely *Tangible* ( $p$  value = 0.000), *Reliable* ( $p$  value = 0.000), *Responsiveness* ( $p$  value = 0.007), *Assurance* ( $p$  value = 0.010) and *Empathy* ( $p$  value = 0.000) are significantly related to the patient satisfaction variable ( $p$  value  $< 0.05$ ). This is in line with research Hasbi et al. (2023) entitled The Relationship between Quality of Nursing Services and Patient Satisfaction Levels in the Intensive Care Unit (ICU) of RSD dr. H. Soemarno Sosroatmodjo Tanjung Selor from the results of his research obtained a  $p$  value of 0.000 ( $p < 0.05$ ) which means that there is a significant relationship between service quality and patient satisfaction levels.

Service quality is the main key to achieving company success, besides that it can also be an advantage to compete with similar service companies. Whether the quality of service is good or not depends on the hospital's ability to consistently meet patient desires, this can become the basis for making a difference with other hospitals. By getting good quality service while in the hospital, it will certainly foster a good impression from patients, all of which will lead to a sense of satisfaction (Nafisa & Sukresna, 2018).

According to the researcher's analysis, pThere are research results that indeed found that most patients expressed satisfaction with the services at the outpatient installation of Tangerang City Hospital as much as 58.8%, but there are still 41.2% of patients who expressed dissatisfaction with the poor service from the hospital. This needs to get attention from the management to immediately make improvements to the shortcomings found in this study such as increasing responsiveness in the form of responses to patient complaints, both those complained about directly and complaints submitted online. Providing certainty of service time clearly informed to patients, as well as certainty of the presence of doctors who come on time and guarantees of reliable medical personnel and empathy for patients. With the improvement of the quality of services that are getting better, it is hoped that patient satisfaction can also increase.

#### **h. The Relationship between Effective Communication and Patient Satisfaction**

Bbased on the resultsstatistical test of effective communication relationshipwith patient satisfactionThe results showed that there was a significant relationship between effective communication and patient satisfaction with a p value of  $0.000 < 0.05$ . The results of the study alsoThe results showed that all dimensions of effective communication, namely Respect (p value = 0.004), Empathy (p value = 0.019), Audible, (p value = 0.000), Clarity (p value = 0.000), and Humble (p value = 0.004) were significantly related to the patient satisfaction variable (p value  $< 0.05$ ). HThis is in line with research Rusnoto (2019) entitled The Relationship between Communication and Nursing Services with Patient Satisfaction Levelsfrom the results of the research, a p value of 0.001 was obtained (p  $< 0.05$ )which means that there is a significant relationship between communication and patient satisfaction levels.

Communication in hospitals is communication that occurs between nurses and clients.the person concerned andother members of the healthcare team. Effective communication is communication that is timely, accurate, complete, clear, and understood by the recipient of the message will reduce the potential for errors and increase patient safety. Communication can be done verbally, in writing, and electronically. With communication being one way to provide accurate information and build a relationship of mutual trust, with the hope that clients will be satisfied with the service they receive (Saputra, 2023).

Ineffective communication is caused by health workers' lack of understanding of their duties and responsibilities in providing health services to build good communication with clients or patients. Officers only focus on providing medical treatment that will be received by the patient, health workers forget to communicate well so that sometimes patients feel they do not understand all the information about the actions that will be taken, so that complaints arose from patients (Yusuf, 2017).

According to the researcher's analysis, sMost of the patient's complaints in the form of pain, weakness and helplessness are conveyed to the nurse or doctor so that it is considered worrying for the patient, afraid of unexpected things happening such as disability or even death. If these complaints do not get attention, it will result in disappointment for the patient, resulting in complaints and dissatisfaction from the patient.

## CONCLUSION

The description of the characteristics of respondents at the Outpatient Installation of Tangerang City Hospital, the gender is mostly female (65%). The age of respondents is mostly  $>35$  years (58.8%). The education of the largest respondents is highly educated (70.3%). The description of the quality of service, effective communication and patient satisfaction at the Outpatient Installation of Tangerang City Hospital shows the results of statistical tests 54.0% good service quality, 49.6% effective communication is quite effective and 58.8% are satisfied with the services at the Outpatient Installation of Tangerang City Hospital. It is known that there is a significant

relationship between the characteristics of respondents (education (p value 0.013 <0.05)) with patient satisfaction at the Outpatient Installation of Tangerang City Hospital.

It is known that there is a significant relationship between service quality and patient satisfaction with a p value of 0.000 <0.05. There is a relationship between service quality dimensions and patient satisfaction with details of tangible (p value 0.000 <0.05), reliable (p value 0.000 <0.05), responsiveness (p value 0.007 <0.05), assurance (p value 0.010 <0.05) and empathy (p value 0.000 <0.05). It is known that there is a significant relationship between effective communication and patient satisfaction levels with a p value of 0.000 <0.05. There is a significant relationship between the dimensions of effective communication and patient satisfaction with details of respect (p value 0.004 <0.05), empathy (p value 0.019 <0.05), audible (p value 0.000 <0.05), clarity (p value 0.000 <0.05), humble (p value 0.004 <0.05). The most dominant variable related to patient satisfaction at the Outpatient Installation of Tangerang City Hospital is effective communication with a p value of 0.003 and an OR value of 2.120 (95% CI 1.295-3.470), meaning that effective communication after being controlled for the service quality variable causes respondents to feel 2.120 times more satisfied than ineffective communication.

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