

The Influence of Service Quality on Patient Satisfaction at Selayang Hospital, Selangor

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Abstract: This is because poor service from healthcare and defect in Selayang hospital building make the healthcare industry in increasingly becoming more competitive to fulfil patient satisfaction. This study aims to know what relationship service quality on patient satisfaction. Using a structured questionnaire, data were gathered from 208 patients who receive treatment and had experience treatment at Selayang Hospital. This questionnaire was distributed through social media which is WhatsApp and Instagram. The result shows that all the dimension service quality is significance which can fulfil patient satisfaction. However, social responsibility was the important toward patient at Selayang Hospital. The implication is that to keep patient satisfied, the hospital must invest more or training their healthcare service to make improvement.

Keywords: Healthcare, Patient Satisfaction, Service Quality

1. Introduction

Patients are now seeking a better degree of service quality, which is driving increased levels of competition in the healthcare industry. Recent research conducted by Frost and Sullivan indicates that the healthcare industry in Malaysia is anticipated to expand at an annual rate of 8.4 percent over the course of the following six year (Zainul, 2020). Then, the increasing need for healthcare services as well as the development of innovative care models and approaches to service provision within the industry are being credited as the primary drivers of the growth that is expected to occur (Zainul, 2020).

The emergence of global competition in the healthcare industry has the effect of making patients more inquisitive and concerned about the provision of healthcare services This has resulted in healthcare associations beginning to place an emphasis on providing superior healthcare service quality. This is because day-by-day rising rivalry among hospitals stimulates clients to make the best option when picking any institution (Fatima *et al.*, 2018). So, to address the need to improve bad health services, manage costs, and satisfy increasing patient expectations for quality of care and healthcare services,

improving the quality of healthcare has become a key priority for all health systems and organizations across the world (Fatima *et al.*, 2018).

According to Swain and Singh (2021), service quality is important for hospitals in verifying and then improving weaker aspects of their healthcare delivery structure. This is because effective quality service can satisfy the satisfaction of patients who receive services at the hospital. So, when service quality has become a hot topic for hospital due to its strong links to profitability, cost savings, and market share (Al-Damen, 2017). Aladwan *et al.* (2021), defined that service quality refers to the gap between a customer's expectations for a service and their perceptions of the actual service supplied, and it has gotten a lot of attention in service marketing research. Thus, it is not only quality service that can help a hospital's management, but it is also patient satisfaction that has an impact.

Besides that, the Ministry of Health (MOH) of Malaysia serves as the country's primary regulatory and policy-making agency. As such, it exerts a significant amount of influence over the healthcare industry in Malaysia. There is a two-tiered healthcare system, which consists of both government hospitals and private hospitals that give the medical services to patients (Kang, 2019). So, the public sector is Malaysia's largest health-care provider. There are now 135 government hospital and 9 special medical institutions with total 41, 995 beds available (Kang, 2019).

In this research, Selayang Hospital has been selected where this hospital is the closest hospital for the people of Selayang area to get services. The medical facility has 960 beds, 20 clinical specialties, and offers a range of secondary and advanced care services on a national scale. The Comprehensive Hospital Information System environment has been planned, constructed, and outfitted with cutting-edge technology at Selayang Hospital, which has the primary intention of providing excellent clinical care. Then, Selayang Hospital is the first hospital in Malaysia and the world to operate with this system that covers all areas of its operations. This makes it the first hospital in the world to operate in Malaysia. As a result, in order to accomplish the goals of having the finest possible facility conditions, the hospital must ensure that its organisation, management, and administration are carried out in an efficient and highly trained manner (Hospital Selayang, 2020).

After that, the Selayang Hospital is dedicated to providing healthcare service that are professional, safe, quality, friendly and caring. Selayang Hospital provides services by giving priority to critical and semi-critical cases with waiting time for critical cases (red zone) to be treated immediately, semi-critical cases (yellow zone) will be treated within 30 minutes, and non-critical cases (green zone) will be treated within 90 minutes in accordance with the severity of the patient's condition. In addition, Selayang Hospital provides facilities and an environment that are hygienic, comfortable, secure, and organised.

Patient satisfaction in hospital is influenced by service quality. However, there are some issues that arise in most at Selayang Hospital which is still not fulfil their expectation. In this study, there have two main issues in the Selayang Hospital.

Firstly, poor service from healthcare in Selayang Hospital (San and San, 2022). According to Zawani *et al.* (2021), reported that the rate Malaysia's health care services, including Hospital Selayang, are relatively low compared to other countries. Hence, poor service quality results in a failure to satisfy the needs of the patient, which may prevent and weaken the patient's trust in the offered medical services and have a detrimental effect on their health (Noris *et al.*, 2022). So, in this study it is important to investigate the relationship between trustworthiness and patient satisfaction at Selayang Hospital to improve the healthcare performance.

Secondly, defect in Selayang hospital building (Jesumoroti *et al.*, 2022). This defects in hospital construction have a substantial detrimental effect on the value of services and industry standards in the healthcare industry. According to Lai *et al.* (2022), the deterioration of hospital structures has led to accidents involving fire outbreaks and ceiling collapses in hospital buildings all around Malaysia over the years include Selayang Hospital. Thus, this critical research must be conducted immediately to look

into the maintenance management procedures of hospital buildings in Selayang Hospital as a result of these accidents, which pose a serious threat to patient safety and wellness.

Therefore, research objectives for this study are to determine which dimensions of the service quality has the greatest impact on overall patients at Hospital Selayang and to investigate the relationship of service quality on patient satisfaction at Selayang Hospital. This study conducted at service quality on patient satisfaction at Selayang Hospital. The target population was the patient of Selayang Hospital. Convenient sampling method will used to collect data due to the population of total patient in Selayang Hospital. Then, survey questionnaires were conveniently distributed among the patients through WhatsApp and Instagram. This questionnaire was developed to investigate the impact of service quality on patient satisfaction at Selayang Hospital.

This research aimed to investigate the impact of service quality on patient satisfaction at Selayang Hospital. The SERVQUAL model, in its modified form, has seen widespread adoption as a tool for measuring performance in the service business, including the provision of medical services in hospitals. Additionally, the researcher will see which of these dimensions can be improve for advancement. After that, this research was important to the overall satisfaction of patients in the evaluation of the performance of hospital management. Patients who are satisfied with the services they receive are more likely to recommend and come back if they have similar need in the future. The findings of the research may also be used as a reference in the future by another hospital located in Selangor for the purpose of enhancing the level of care provided by that institution.

2. Literature Review

2.1 Patient Satisfaction

Customer satisfaction and patient satisfaction can also be used similar meaning. However, only the hospital can provide patient pleasure. This is because, patient satisfaction has an impact on service quality, which is seen as a function of healthcare service performance and patient expectations (Javed and Ilyas, 2018). According to Javed *et al.*, (2019), the satisfaction of patients from service quality can be increased by influencing their perceptions of health care service quality. If the patient's expectations are lower, they are more likely to be satisfied, if their expectations are higher, they are more likely to be disappointed (Javed and Liu, 2018). According to Alomari (2022), there are three type of satisfaction may occur to patient: (1) When the performance meets the standards, it feels natural. (2) Satisfaction (positive disconfirmation): occurs when actual performance exceeds expectations. (3) Dissatisfaction (negative disconfirmation): when the performance really meets or exceeds the standards. Thus, It's critical to assess the level of healthcare service quality in order to satisfy patients Vanichchinchai (2022).

2.2 Service quality (SERVQUAL)

According to Al-Damen (2017), certain definitions of service quality, it is the consequence of a customer's comparison of their expectations for a service and their impression of how the service was delivered. Hence, the SERVQUAL model, which includes the dimensions of reliability, empathy, responsiveness, assurance, and tangibility, is primarily utilised as a multi-dimensional research instrument for customer satisfaction (Pakurár *et al.*, 2019).

In this study, the researcher will apply the modified version of SERVQUAL model in measuring the hospital service quality, which is trustworthiness (reliability), patient safety (assurance), infrastructure (tangibles), personnel quality (empathy) and social responsibility (responsiveness). So, Figure 1 shows the framework that the researchers used in this study.

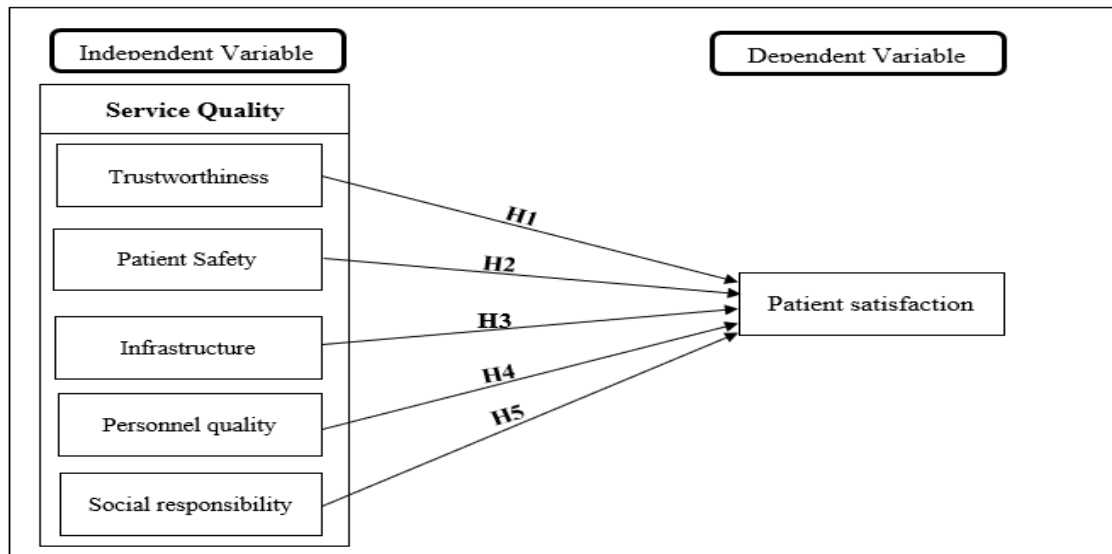


Figure 1: Framework on the influence of service quality on patient satisfaction at Selayang Hospital, Selangor

(a) Trustworthiness

Trustworthiness is determined by characteristics of the object of trust, such as whether or not they are actually reliable in the appropriate manner and have appropriate commitments and values (Sheehan *et al.*, 2021). Patients' trust in the hospital staff's expertise and skills in providing medical care, as well as the credibility of the health-care service. It corresponds to the service quality assurance component (Swain & Singh, 2021). According to Rahman *et al.* (2022), patient willing to pay more and trust when getting a better service provider. Therefore, the patient's willingness to pay a premium for hospital service environments are based on them trust in the overall service environment. Thus, the hypothesis in this study was:

H1: Trustworthiness has a positive effect on patient satisfaction.

(b) Patient Safety

World Health Organization (2019) defined that patient safety is fundamental to delivering quality essential health services. This is to prevent and reduce risks, errors and harm that occur to patients during provision of health care. In addition, within the healthcare system, patient safety is a complicated and developing medical specialty. With this, the risks, mistakes, and harm to patients that arise during the delivery of healthcare is intended to be avoided or minimised (Müller *et al.*, 2018). According to Garcia *et al.* (2019), patient safety is recognized as one of the major issues since, often, patient care is compromised by organisational weaknesses, flawed management, and poor organisational procedures that depend on the performance of health professionals. Therefore, better organizational hospital training the specialists to change healthcare habit. According to Al-mugheed *et al.* (2022), the fact that nurses interact with patients more closely and frequently coordinate patient care than physicians may be the reason for fulfil patient satisfaction better than the fact that doctors have less direct experience providing daily patient care or that patient safety instruction is often lacking from medical school curricula may be the cause of their less positive views toward patient safety. Therefore, better organizational hospital training the specialists to change healthcare habit. Thus, the hypothesis in this study was:

H2: Patient safety has a positive effect on patient satisfaction.

(c) Infrastructure

According to Swain & Singh (2021), the terms of "infrastructure" refers to the basic resources required for the provision and delivery of healthcare services. Then, infrastructure also includes factors such as competence, skills, attitudes, motivations, and reassurances. A hospital with visually pleasing facilities, up-to-date equipment, neat, professional-looking staff, and documents linked to services (Setiono and Hidayat, 2022). These factors are significant because they have been shown to influence patient satisfaction. Thus, the hypothesis in this study was:

H3: Infrastructure has positive effect on patient satisfaction.

(d) Personnel Quality

Personnel quality is an essential consideration in developing and implementing methods to improve patient care. In the healthcare and medical tourism industries, personnel quality such as quality of doctors, nurses, administrative staff and interpreters (Al-Daoar & Munusamy, 2019). Then, patient care and attention are provided by the hospital's staff. This component describes how the hospital gives each patient individual attention. This dimension's main goal is to demonstrate to patients that they are unique and that their requirements are recognised through the services they receive (Zukhrufani *et al.*, 2022). Thus, the hypothesis in this study was:

H4: Personnel quality has positive effect on patient satisfaction.

(e) Social Responsibility

According to Paakkari & Okan (2020), the concept of social responsibility, hospital employees are accountable for performing their civic responsibilities and taking steps that assist hospital patients. The reason for this is that there will be a balance between economic progress and the well-being of society and the environment in this manner. So, it can help an institution build a positive reputation among the hospital's patients because of balance environment with patient (Mitev, 2019). According to Rahman *et al.* (2022), in hospitals, where human abilities and interventions are significant determinants of patient satisfaction, social responsibility is a key aspect that impacts service quality overall. Thus, the hypothesis in this study was:

H5: Social responsibility has positive effect on patient satisfaction.

3. Research Methodology

3.1 Research Design

A research design is basically the structure or plan of a study that helps researchers collect and understand data. It is a list of steps for how to do research. The research design is then the plan for gathering data, measuring it, and analyzing it (Pandey, 2021). According to Cheong (2017), the two different kinds of research designs that may be classed are known as quantitative research and qualitative research. The most important distinction that can be made between quantitative and qualitative research is the kind of data that is gathered.

In this study, the researcher uses quantitative research design to collect the data. Thus, this research was conducted at the Selayang Hospital in the state of Selangor. So, the patients who received treatment at the Selayang Hospital in Selangor would serve as the respondents in this study. Therefore, the quantitative approach was conducted by the technique consist of internet distributed questionnaire surveys.

3.2 Data Collection

In this study, there are two types of data primary data and secondary data. In this study the researcher uses primary data. Primary data refers to the first-hand data gathered by the researcher himself. Then, the key data sources include things like surveys, observations, experiments, questionnaires, and interviews with real people. In this particular study, the researchers make use of a strategy that involves questionnaires. Then, questionnaires are an observational method that consist of a sequence of items that are delivered to a responder in written form, and the participant is expected to respond in written form (Ajayi, 2017). So, in this research questionnaires were distributed social media which is WhatsApp and Instagram to get a respondent who received treatment and experience treatment at the Selayang Hospital in Selangor would serve as the respondents in this study.

3.3 Data Analysis

To conduct the questionnaire, data obtained will be entered into Statistical Package for Social Sciences (SPSS). Percentage, ratio, mean, median, and standard deviation are all possible ways of expressing the data. Furthermore, inferential analysis such as Spearman Correlation was employed to make a comparison and test a hypothesis. Data is then presented in visual form, such as a histogram or bar graphs or even pie charts.

3.4 Pilot Test

The main purpose of the pilot study was to ensure that the questions were pertinent, consistent, reliable, and easy to understand for the respondents in order to collect the appropriate data for the research (Cheong, 2017). This is because questionnaires may contain certain confusing questions, which lead to the respondents misinterpreting the question. Therefore, a pre-test was conducted on 30 respondents to check for reliability and face validity of the questionnaire.

4. Results and Discussion

4.1 Demographic Analysis

For this study population was composed of the patient who had experienced and who has been received treatment at Selayang Hospital. Among the 208 in the total population, the were 114 (54.8%) are female and 94 (45.2) are male. The respondents mostly were from the age range of 21-30 (71.2%), followed by the ages of 31-40 years 33 (15.9%), 40 and above years 16 (7.7%), and 11 (5.3%) of them are below 20 years. Hence, most of the respondents fall within the ages of 21-30 years. Then, it was followed by Malay respondents 159 (76.4%), 30 (14.4%) are Indian, 18 (8.7%) are Chinese and 1 (0.5%) are other races. Other races include the India Muslim.

In addition, how often respondents go to hospital in year is 148 (71.2%) of the respondents go to hospital once a year. Then, 36 (17.3%) are go to hospital two to three per year and 14 (6.7%) which is four to five times go to hospital because of had an appointment or check up with a doctor. Besides that, 10 (4.8%) of the respondents go to hospital once a month. After that, majority of 155 (74.5%) of the respondents never had any surgery in a Selayang Hospital. Then, 53 (25.5%) are had surgery in a Selayang Hospital. Moreover, 108 (51.9%) had utilized the services of a hospital which is call the ambulance. Moreover, 100 (48.1%) of respondents never utilized the services of a hospital.

4.2 Reliability Test

Table 1 shows the coefficient values of Cronbach's alpha for each variable. The independent variable trustworthiness and patient safety that consist of 7 and 5 items, have achieved coefficient values of Cronbach's alpha value 0.924 and 0.925 respectively. After that, infrastructure consist of 6 items has an alpha coefficient 0.898. Personnel quality covered 5 items in the questionnaire has 0.928 alpha

coefficient value. Then, social responsibility consists of 7 items which has 0.938 an alpha coefficient. Lastly, for dependent variable patient satisfaction that covered 5 items has obtained an alpha coefficient value of 0.949. Hence, the reliability of all the independent variables and dependent variables shows excellent internal consistency.

Table 1: Reliability test

Variables	Cronbach's Alpha (α)	Number of Items
Trustworthiness	0.944	7
Patient Safety	0.963	5
Infrastructure	0.944	6
Personnel Quality	0.948	5
Social Responsibility	0.973	7
Patient Satisfaction	0.983	5
Total		35

4.3 Descriptive Analysis

Table 2 shows the descriptive statistics which is the mean and standard deviation for the independent variable and dependent variable. It clearly indicates that the values of mean ranged from 4.0654 to 4.4106. Whereas the values of standard deviation slightly different with the range of 0.71988 to 0.81251. So, meaning to say that the data are closely distributed around the mean.

Table 2: Descriptive analysis

	N	Std.		Interpretation	
		Mean	Deviation Variance		
Satisfaction	208	4.4106	0.81251	0.660	High
Trust	208	4.0654	0.75339	0.568	High
Safety	208	4.2002	0.73544	0.541	High
Infrastructure	208	4.2126	0.71988	0.518	High
Personnel	208	4.0988	0.79919	0.639	High
Social	208	4.2101	0.76525	0.586	High
Valid N (listwise)	208				

4.4 Normality Test

Normality test is to determine whether the data are normally distributed or non-normally distributed based on the significance value (p). Figure 2 shows that histogram was normally. Table 3 shows the skewness was negative. This is because the skewness indicate data that are skewed left. Moreover, Figure 3 shows that normality Q-Q plot for patient satisfaction. Table 4 shows the test of normality with coefficients of Kolmogorov-Smirnov. For sample size (N) more than 50 respondents, Kolmogorov-Smirnov will be tested. In this research, the sample size is 208 respondents.

Therefore, Kolmogorov-Smirnov is used to test the normality. So, Table 4 indicates the test of normality for the six compute variables which consist of patient satisfaction, trustworthiness, patient safety, infrastructure, personnel quality, and social responsibility less than 0.001. Hence, the test for normality is significance and the data distribution is non-normal.

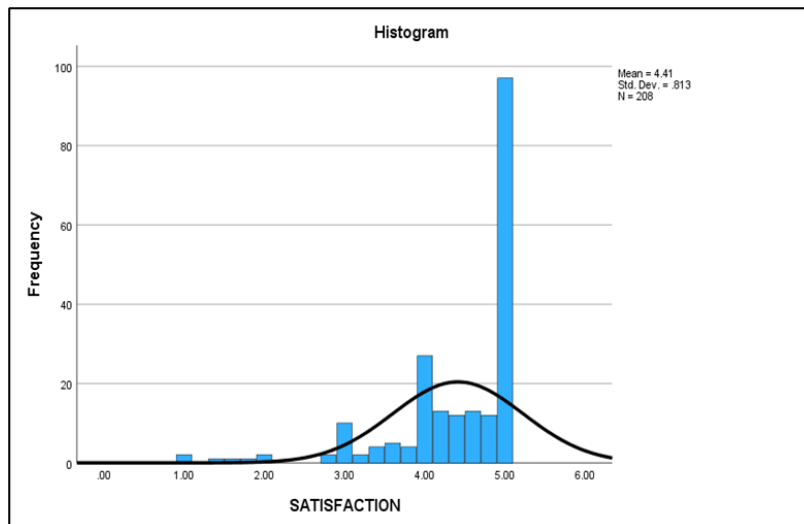


Figure 2: Histogram

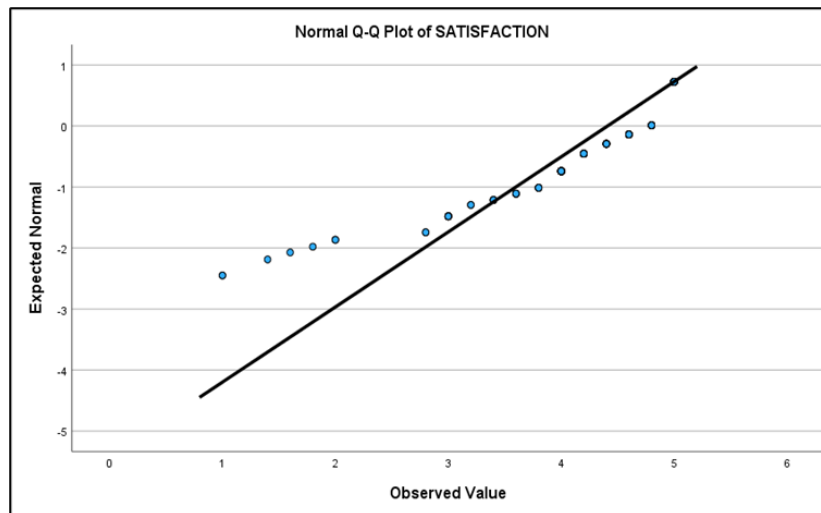


Figure 3: Normal Q-Q Plot

Table 3: Skewness and Kurtosis

		Statistic	Std. Error	
Satisfaction	Mean	4.4106	.05634	
	95% Confidence Interval for Mean	Lower Bound	4.2995	
		Upper Bound	4.5216	
	5% Trimmed Mean	4.5128		
	Median	4.8000		
	Variance	.660		
	Std. Deviation	.81251		
	Minimum	1.00		
	Maximum	5.00		
	Range	4.00		
	Interquartile Range	1.00		
	Skewness	-1.852	.169	
	Kurtosis	3.872	.336	

Table 4: Test of normality

	Kolmogorov-Smirnov ^a		
	Statistic	df	Sig.
Satisfaction	0.234	208	<.001

4.5 Correlation

According to Table 5, the Spearman's rho correlation coefficient is 0.621 which is a positive and moderate value. Meaning to say that there is a moderate positive correlation between patient satisfaction and trustworthiness. Besides, the value of p is <0.001 which is less than 0.01. Hence, the data is significant. Thus, the hypothesis is accepted. After that, from the Table 5 result shows that there is a positive correlation between patient satisfaction and patient safety. This is because the spearman' rho correlation coefficient is 0.675 which is a moderate and positive value. So, when the value of p is <0.001 which is less than 0.01 the data is significant. Hence, the hypothesis is accepted.

Based on Table 5, the Spearman's rho correlation coefficient is 0.705 which is a positive and strong value. This result shows that there is a strong positive correlation between patient satisfaction and infrastructure. The value of p is <0.001 which is less than 0.01. Meaning to say that the data is significance. Therefore, the hypothesis is accepted. Then, from the Table 5 result shows that the Spearman's rho correlation coefficient is 0.673 which is a moderate value and positive. This result shows that there is strong positive correlation between patient satisfaction and personnel quality. The value of p is <0.001 which is less than 0.01. Thus, the data is significance and hypothesis are accepted. Moreover, from the Table 5 the Spearman's rho correlation coefficient is 0.751 which is positive and strong value. This result shows that there is strong positive correlation between patient satisfaction and social responsibility. The value of p is <0.001 which is less than 0.01. Meaning to say that data is significance. Hence, the hypothesis is accepted.

All the hypotheses were accepted. H₁, H₂, H₃, H₄ and H₅ were accepted because the p value is less than 0.05. Thus, the data is significant. The highest correlation coefficient of H₅ shows that patient satisfaction is the most important factor affecting social responsibility.

4.6 Discussion

This research study conducted to determine the relationship between the independent variable (trustworthiness, patient safety, infrastructure, personnel quality, and social responsibility) towards dependent variables (patient satisfaction). The intention of this study is to prove that the independent variables have a significant effect on the dependent variable.

Therefore, the effect of trustworthiness on the patient's satisfaction was found to be significant and has a positive associated correlation coefficient = 0.621, $p < 0.01$. Hence, H₁ is accepted. The previous study by Ridhwan *et al.*, (2019) was also having the same result, which showed there was a significant influence on trust and satisfaction So, this can create a confidence in the patient that believe hospital provide service in good (Suseno & Muthohar, 2018).

Then, the effect of patient safety on the patient satisfaction was found to be significant and has a positive associated correlation coefficient = 0.675, $p < 0.01$. Thus, H₂ is accepted. This finding was equally with previous study by Swain & Singh (2021), which is patient safety has a positive effect on patient satisfaction. This is because hospitals need to focus on important safety issues to provide patients with high-quality care. Thus, the administration of the hospital must make certain that the medical staff functions as an integrated and well-coordinated team in order to enhance the level of patient safety.

Table 5: The Spearman's rho correlation coefficient

			Correlations					
			PS	T	SAF	INF	PQ	SR
Spearman's rho	PS	Correlation Coefficient	1.000	.621**	.675**	.705**	.673**	.751**
		Sig. (2-tailed)	.	<.001	<.001	<.001	<.001	<.001
		N	208	208	208	208	208	208
	T	Correlation Coefficient	.621**	1.000	.774**	.729**	.762**	.761**
		Sig. (2-tailed)	<.001	.	<.001	<.001	<.001	<.001
		N	208	208	208	208	208	208
	SAF	Correlation Coefficient	.675**	.774**	1.000	.782**	.730**	.757**
		Sig. (2-tailed)	<.001	<.001	.	<.001	<.001	<.001
		N	208	208	208	208	208	208
	INF	Correlation Coefficient	.705**	.729**	.782**	1.000	.798**	.784**
		Sig. (2-tailed)	<.001	<.001	<.001	.	<.001	<.001
		N	208	208	208	208	208	208
	PQ	Correlation Coefficient	.673**	.762**	.730**	.798**	1.000	.829**
		Sig. (2-tailed)	<.001	<.001	<.001	<.001	.	<.001
		N	208	208	208	208	208	208
	SR	Correlation Coefficient	.751**	.761**	.757**	.784**	.829**	1.000
		Sig. (2-tailed)	<.001	<.001	<.001	<.001	<.001	.
		N	208	208	208	208	208	208

** . Correlation is significant at the 0.01 level (2-tailed).

Moreover, the effect of infrastructure on the patient satisfaction was found to be significant and has a positive associated correlation coefficient = 0.705, $p < 0.01$. Thus, H_3 is accepted. According to Ampaw *et al.* (2020), there is significant association between infrastructure and patient satisfaction. Therefore, following to landmark study, impressive healthcare facilities tend to live up to patients' expectations, boosting both hospital staff and patients' confidence in their ability to get quality medical care.

After that, the effect of personnel quality on the patient satisfaction was found to be significant and has a positive associated correlation coefficient = 0.673, $p < 0.01$. Thus, H_4 is accepted. This result is supported by Pakurár *et al.* (2019), personnel quality positively influences customer satisfaction. So, patients tend to have a more positive impression of the hospital when they interact with staff members who are polite and kind, such as doctors and nurses.

The effect of social responsibility on the patient satisfaction was found to be significant and has a positive associated correlation coefficient = 0.751, $p < 0.01$. Hence, H_5 is accepted. According to previous study social responsibility has a positive effect on patient satisfaction (Swain and Singh, 2021). Hence, a health care provider shouldn't just be concerned about their own earnings, they should also be concerned about the overall health of their patients. Patients need not only high-quality care from the medical professionals working in hospitals, but also services that are within their financial means.

5. Conclusion

This study will get a result from objectives which is to investigate the impact of service quality on patient satisfaction at Selayang Hospital and will determine which dimensions of the service quality has the greatest impact on overall patients at Hospital Selayang. The result of this study researcher can get from surveys questionnaires that will be distributed to 208 of the respondents in this study. So, from the result researcher can get know which dimension of the service quality has the greatest impact on overall at Selayang Hospital.

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