

## The Role of Online Queues as a Moderator Between Service Quality and Patient Satisfaction for National Health Insurance's Participants

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### ABSTRACT

This study aims to provide new insight and fill the gap of previous research by adding online queues to moderate the effect of perceived service quality and the organization's image on perceived satisfaction. Data were collected from 120 respondents who are members of National Health Insurance (JKN) who became patients at Prof. dr. I Goesti Ngoerah Gde Ngoerah Hospital Denpasar. Partial Least Square Structural Equation Modeling (PLS-SEM) was used to analyze and test hypotheses. This research applied quantitative approach using a pre-existing measurement scale. The results of this study prove that service quality has a positive and significant effect on customer satisfaction. Another finding from this study is that an organization's image does not significantly affect customer satisfaction. Online queues could not moderate the relationship between service quality and the organization's image on customer satisfaction. The practical implication of this research is that hospitals must continue to improve the quality of their services to increase patient satisfaction with the hospital.

**Keywords:** Customer Satisfaction; National Health Insurance; Online Queues; Organization's Image; Service Quality

## INTRODUCTION

The enactment of Act Number 24 of 2011 (Indonesia. The Audit Board [BPK RI], 2011) concerning the Social Security Agency on Health requires hospitals to adapt immediately. The establishment of the Social Security Agency on Health (*BPJS Kesehatan*) as the organizer of social security in the health sector brought about many changes in the health service payment scheme. With a membership achievement of 248,541,736 or 90.26% of the total population of Indonesia, participants in the National Health Insurance (JKN) are the biggest customers in hospitals. In the Province of Bali, *BPJS Kesehatan* membership is 4,193,996 people, or 97.83% of the population. This makes JKN participants the most prominent customers at hospitals in the Province of Bali. In addition to membership, health facilities are partnering with *BPJS Kesehatan*, namely 646 First Level Health Facilities (FKTP), including 120 community health centers, 300 individual doctors, 91 individual dentist practices, 134 main clinics, and 1 primary hospital. Meanwhile, the Advanced Level Referral Health Facilities (FKTRL) consist of 74 hospitals and 12 optics (Social Security Agency on Health [BPJS Kesehatan], 2023).

According to Andaleeb (1998), the healthcare or hospital industry is one of the fastest-growing public sector industries. An increasingly intelligent and selective society demands optimal health services from hospitals. These demands tend to increase and are very dynamic. This phenomenon is a challenge for hospitals to continuously innovate and improve strategies in providing quality services to patients. Afrizal (2018) describes the quality of service offered to patients as an expression of an attitude that combines patient expectations with service. Lestari et al. (2021) in their research found that the implementation of JKN by *BPJS Kesehatan* had a significant impact on the health service industry and encouraged the emergence of a new population that previously did not have health insurance. This impacts increasing the number of patient visits to the hospital, which, if not handled properly, will lead to a buildup of queues at the hospital, ultimately reducing patient satisfaction. Kotler and Keller (2009) state that satisfaction is a person's feeling of pleasure or disappointment that arises when the performance (result) of a product is compared to the performance (or result) expected. According to Cronin and Taylor (1992), a positive and robust causal relationship exists between service quality and customer satisfaction. Research is conducted in four industrial fields: banking, healthcare, dry cleaning, and fast food. Regarding service, Harun (2006) states that customer satisfaction is influenced by three factors, they are the accuracy of promises (commitment), the distance to the customer's location, and the ability to help customers. Meanwhile, Yuliarmi & Riyasa (2007) and Singh et al. (2021) in their study stated that if it is associated with service, five factors influence customer satisfaction: reliability, responsiveness, assurance, empathy, and tangible.

Prof. dr. I Goesti Ngoerah Gde Ngoerah Central General Hospital (RSUP), as one of the health service providers for JKN participants, continues to improve the quality of its administrative and medical services. To enhance the quality of service, the hospital must know whether the patient is satisfied with the services provided by the hospital so far. This is important to do as a reference for Prof. dr. I Goesti Ngoerah Gde Ngoerah in improving service quality to maximize patient satisfaction. In addition to improving the quality of medical services, RSUP Prof. dr. I Goesti Ngoerah Gde Ngoerah also enhanced the quality of hospital administration services. They made the improvements by providing information services, patient registration, and arranging queues for participants at the hospital. To prevent large crowds of patients in the administrative service process, RSUP Prof. dr. I Goesti Ngoerah Gde Ngoerah implements online queuing, from the patient registration process to waiting for service at the polyclinic. With online queues, it is hoped that it can provide certainty to patients regarding waiting time for assistance so that there is no accumulation of patients at the hospital to give a

pleasant hospital service experience.

Based on the preliminary description, the problems in this study involve examining whether the quality of service affects patient satisfaction at RSUP Prof. Dr. I Goesti Ngoerah Gde Ngoerah. Additionally, it investigates whether the image of RSUP Prof. Dr. I Goesti Ngoerah Gde Ngoerah influences the satisfaction of JKN participants. The study also explores whether the online queue moderates the relationship between service quality and patient satisfaction and whether the online queue moderates the relationship between hospital image and patient satisfaction at RSUP Prof. Dr. I Goesti Ngoerah Gde Ngoerah.

This study provides new insights compared to previous research by adding online queue variables as a moderating variable on the effect of service quality and the organization's image on customer satisfaction. This study involved JKN participants, where patients did not need to pay for health services themselves so that the perception of patient satisfaction was not biased towards the effect of the costs that must be incurred in obtaining health services at the hospital. This study aimed to determine and analyze the effect of service quality on patient satisfaction, the impact of hospital image on patient satisfaction, do online queues moderate the relationship between service quality and patient satisfaction, and do online queues moderate the relationship between hospital image and patient satisfaction at RSUP Prof. dr. I Goesti Ngoerah Gde Ngoerah.

## **LITERATURE REVIEW**

### **Marketing Management Theory**

Expectancy-disconfirmation theory is a foundational concept in marketing management theory, explaining the dynamic relationship between consumer expectations and their resulting satisfaction with a product or service. Initially proposed by Oliver (1980), the theory posits that consumer satisfaction is determined by the level of disconfirmation experienced, which is the disparity between their prior expectations and the actual outcomes they encounter. According to Oliver's (1980) findings, positive disconfirmation—where actual experiences surpass expectations—tends to significantly enhance consumer satisfaction, while negative disconfirmation—where experiences fall short of expectations—detracts from satisfaction. This dichotomy underscores the critical importance for businesses to not only meet but exceed customer expectations to foster high levels of satisfaction and loyalty.

Further research by Spreng et al. (1996) expanded on Oliver's work, demonstrating that the expectancy-disconfirmation theory is a robust predictor of customer behavior over the long term. Their study revealed that customers whose experiences consistently exceed their expectations are more likely to develop a strong loyalty to a brand, resulting in repeat business and positive word-of-mouth. Conversely, repeated negative disconfirmations can lead to dissatisfaction, diminished brand loyalty, and potentially negative word-of-mouth.

The implications of expectancy-disconfirmation theory are profound for marketing strategy and customer relationship management. Businesses are encouraged to set realistic expectations through their marketing communications and ensure their product or service delivery not only meets but ideally exceeds these expectations. By carefully managing customer expectations and consistently delivering superior experiences, companies can enhance customer satisfaction, build lasting relationships, and ultimately achieve sustained competitive advantage in the marketplace.

In contemporary applications, expectancy-disconfirmation theory continues to inform various aspects of customer experience management, from product development and quality control to customer service and feedback systems. The theory's relevance is particularly evident in industries where customer satisfaction is a critical determinant of success, such as hospitality, retail, and technology. As businesses increasingly leverage data analytics and customer feedback mechanisms, the principles of expectancy-disconfirmation theory guide efforts to fine-tune offerings and enhance the overall customer experience, ensuring that consumer expectations are not only met but delightfully exceeded.

### **Service Quality**

Service quality is defined as an effort to satisfy all consumer needs and desires, including the accuracy of delivery, by balancing consumer expectations (Tjiptono, 2014). According to ISO-8402 (Loh, 2001 in Prasetyo, 2017), quality is the totality of facilities and characteristics of a product or service that satisfies a need, either explicit or implicit. In ISO 9000 (Poli, 1999 in Prasetyo 2017), it is explained that quality is the overall characteristic of a product or service that can satisfy explicit or implicit customer needs. Krajewski and Ritzman (2002) define quality from the perspective of business actors and consumers. According to business actors, quality is compliance with specified details. In this case, business actors determine specific tolerances for the critical dimensions of each part produced. From the consumer side, quality means value, namely how well an item or service fulfills its purpose at the price level consumers are willing to pay. Meanwhile, Goetsch and Davis (1994) define quality more broadly: a dynamic state concerning goods, services, people, processes, and environments that meet or exceed expectations.

Service quality can be one factor determining customer satisfaction, especially in the service sector (Song et al., 2022; Tang et al., 2022), where the better the quality of service provided, the better the service provider's image (Prasetyo, 2017). Zeithaml et al. (1990) stated that the perception of service quality is determined by the difference between the customer's opinion of the reality they receive and the customer's expectations of the service received. Meanwhile, Tenner and De Toro (1992) state that the most easily understood measure of the quality of goods or services is faster, better, and cheaper. According to Soemirat and Adiarto (2007), an organization's image is an impression, feeling, and public image of the organization, created intentionally from an object, person, or organization. A good image will increase customer satisfaction, service quality, and loyalty (Lai et al. in Hidajahningtyas et al., 2013).

### **Organizational Image**

According to Canton in Soemirat and Ardianto (2007), organizational image is an impression, feeling, the public, or public image of a company created intentionally from a product or service. Organizational image is the public's perception of the company or its derivatives (Kotler & Keller, 2009). According to Weiwei (2007), an organization's image is the impression that comes to a person's mind when he hears the name of a hotel, restaurant, or other business organization. Jefkins (1995) argues that corporate image is the whole organization's image, not just looking at its products or services. Organizational image is related to the company name, architecture, product variety, tradition, ideology, and the impression of quality conveyed by every employee interacting with the client organization.

### **Queue**

Queuing theory is a scientific field that conducts research to identify and measure the causes and effects of a queue. According to Heizer and Render (2006), a queue is a line of people or goods waiting to be served. Queuing theory is a crucial part of operations

and an invaluable tool for operations managers. Stevenson (2005) states that queuing theory is a mathematical approach to waiting line analysis. Meanwhile, Bronson (1996) said that the queuing process is a process that involves a customer arriving at a service facility, then staying in a queue line if all the servers are busy, and finally leaving the place.

This theory is fundamental in various industries where service efficiency and customer satisfaction are paramount. In retail, healthcare, telecommunications, and transportation, queuing theory helps in designing effective service systems that minimize wait times and optimize resource utilization. By understanding the patterns of customer arrivals and the service process, managers can forecast demand, allocate resources appropriately, and improve service delivery.

For instance, in the healthcare sector, queuing theory can be used to manage patient flow, ensuring that patients receive timely care without overwhelming the healthcare providers. In retail, it helps in managing checkout lines to enhance customer experience and prevent long wait times that could lead to dissatisfaction and lost sales.

### **Customer Satisfaction**

According to Kotler and Keller (2009), customer satisfaction is a feeling of pleasure or disappointment that a person experiences after comparing the perceived performance or results of a product with what he expected. Tjiptono (2014) states that customer satisfaction is a buyer's cognitive situation regarding the equality or disproportion of the results obtained compared to the sacrifices. Customer satisfaction is a post-sale evaluation; if customer satisfaction is achieved, customer loyalty is created; therefore, customer satisfaction is essential for the company (Sulistyawati & Seminari, 2015). According to Rangkuti (2002), customer satisfaction is the reaction to the difference between the previous importance level and the actual performance experienced after use. Hanan and Karp (1991) differentiate the factors that influence customer satisfaction into eight attributes known as "The Big Eight", which consist of the relationship between value and price (value to price), product quality (product quality), features product features, reliability, warranty, response to and remedy of problems, sales experience, and convenience of acquisition.

### **Previous Relevant Studies**

Previous research has been carried out on the relationship between service quality and customer satisfaction, between corporate/organization's image and customer satisfaction, and between queues and customer satisfaction. Still, no one has used an online queuing system as moderation. Safitri et al. (2016), Anfal (2020), and Triyadi et al. (2021) in their research concluded that service quality and an organization's image have a positive and significant effect on customer satisfaction. Rosalia and Purnawati (2018) state that service quality positively and significantly affects patient satisfaction at the hospital. Afrizal's research (2018) states that service quality, hospital image, and patient trust levels partially and simultaneously positively and significantly affect patient satisfaction. However, a study by Andalusi (2018) states that service quality has a positive but insignificant effect on customer satisfaction. Meanwhile, in his research, Abshor (2021) said that corporate image has a positive but insignificant impact on customer satisfaction. Lelono and Vikaliana (2020) state that queues and service quality partially or simultaneously positively and significantly affect customer satisfaction. In their research, Suparmi (2016) said that queues and information positively and significantly affect customer satisfaction. Rohmial (2019) states that the queuing system positively and significantly affects patient satisfaction.

### **Hypothesis Development**

A hypothesis is a temporary conclusion regarding a problem or research question, the truth of which must be tested empirically (Sugiyono, 2017). A hypothesis is a guess that may still be true or false. Based on the problem formulation above, the hypothesis in this research is formulated as follows.

#### ***The Influence of Service Quality on Patient Satisfaction***

Customer satisfaction can be seen if the quality of service provided can meet customer needs. Service quality leads to increased consumer satisfaction, service quality has a positive relationship with consumer satisfaction, and high service quality produces high consumer satisfaction (Tjiptono, 2014). Many studies have been conducted on the influence of service quality on customer satisfaction. Research conducted by Rosalia & Purnawati (2018), Abidin (2016), and Cronin & Taylor (1992) stated that service quality has a positive and significant effect on customer satisfaction. Based on theoretical studies and previous research results, the following hypothesis can be formulated:

H1: Service quality positively affects patient satisfaction at RSUP Prof. dr. I Goesti Ngoerah Gde Ngoerah.

#### ***The Influence of Hospital Image on Patient Satisfaction***

Organizational image has an influence, both directly and indirectly, on customer loyalty (Wu in Anfal, 2020). Image can shape customer perceptions of a company. Customers will consider a service to be good if many people who visit to use the service have a good opinion. In this case, the company's image has a function as a liaison and guardian of harmonious relationships with their customers (Afrizal, 2018). According to Triyadi et al. (2021), brand image has a positive and significant effect on customer satisfaction and customer loyalty. The same thing was expressed by Anfal (2020), company image and service quality partially and simultaneously have a positive and significant effect on customer satisfaction. Based on theoretical studies and previous research results, the following research hypothesis was formulated:

H2: Hospital image positively affects patient satisfaction at RSUP Prof. dr. I Goesti Ngoerah Gde Ngoerah.

#### ***Online Queues Moderate the Relationship between Service Quality and Hospital Image on Patient Satisfaction***

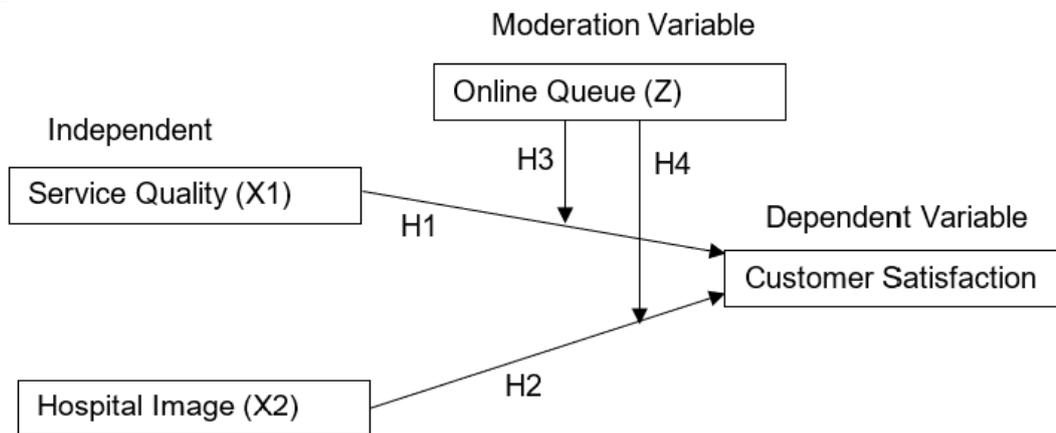
The image of the company, in this case, the hospital, certainly greatly influences the number of patients who come to the hospital. If a hospital does not have a good image, people will think long and hard about going to that hospital, because people are now very health literate. They do not want to risk their health to come to a hospital that has a bad image. Queues arise because service requests exceed service capacity or service facilities, so incoming users cannot be served immediately because the service is busy. Based on research by Rohmial (2019), it was found that the queuing system has a positive and significant effect on customer satisfaction. Lelono and Vikaliana's (2020) research states that the queuing system and service quality have a positive and significant effect on customer satisfaction. However, there has been no previous research that examines the queuing system moderating the relationship between service quality and organizational image on customer satisfaction. Based on theoretical studies and previous research results, the following research hypothesis was formulated:

H3: Online queues moderate the relationship between service quality and patient satisfaction at RSUP Prof. dr. I Goesti Ngoerah Gde Ngoerah.

H4: Online queues moderate the relationship between hospital image and patient satisfaction at RSUP Prof. dr. I Goesti Ngoerah Gde Ngoerah.

The model in this research can be seen in Figure 1, where the independent variables are service quality and hospital image. The moderating variable in this research is the online queue, with the dependent variable being customer satisfaction.

**Figure 1.** Research Framework



## RESEARCH METHOD

The research was conducted at RSUP Prof. dr. I Goesti Ngoerah Gde Ngoerah Denpasar. This research is causal because it aims to determine the causal relationship between service quality variables to the hospital image, online queues, and patient satisfaction. This study's population was JKN participants who visited RSUP Prof. dr. I Goesti Ngoerah Gde Ngoerah Denpasar. The data used in this study is primary data and data collection techniques in the form of questionnaires. The number of samples was taken based on the rule of Hair et al. (2016), namely the number of indicators multiplied by a constant of 5 to 10. The number of indicators in this study was 24, by taking a constant of 5 for reasons of time efficiency so that the number of samples in the study became  $24 \times 5 = 120$  people. Exogenous variables in this study are service quality (X1) and hospital image (X2), while the endogenous variable is patient satisfaction (Y), and the moderating variable is the online queue (Z). Validity and reliability tests were carried out in this study. Using component or variance-based SEM (Structural Equation Modeling) analysis, namely PLS (Partial Least Square), as a data analysis method.

The service quality variable (X1) has 5 (five) dimensions, namely (1) reliability has 3 (three) indicators (providing fast and appropriate services, providing services as promised, and providing appropriate examination and treatment services), (2) responsiveness has 3 (three) indicators (responsive staff helps patients, provides clear information, and handles complaints well), (3) assurance has 3 (three) indicators (doctor's ability to diagnose disease, competence of staff medical treatment in dealing with patients, and polite and friendly service), (4) empathy (empathy) has 3 (three) indicators (caring for patients, officers are easy to communicate with, and service without discrimination), and (5) tangibles has 2 (two) indicators (clean, tidy and comfortable waiting room and clean and neat appearance of staff). The hospital image variable (X2) has 4 (four) indicators: trust, contribution to welfare, positive opinion, and references in referral health services. The online queue variable (Z) has 3 (three) indicators: arrival characteristics, queuing discipline, and service facilities. The patient satisfaction variable (Y) has 3 (three) indicators: satisfaction with officers, satisfaction with services, and satisfaction with service skills. All of these indicators use Likert scale statements.

## RESULTS

**Table 1.** Characteristics of Respondents

Characteristics	Total	Percentage (%)
Gender		
Male	49	40.83
Female	71	59.17
Last Education		
Elementary School	3	2.50
Junior High School	9	7.50
Senior High School	36	30
Diploma	17	14.17
Bachelor	51	42.50
Master	3	2.50
Doctoral	1	0.83
Occupation		
Private Employee	40	33.33
BUMN Employee	2	1.67
Trader	6	5
Entrepreneur	6	5
Farmer	7	5.83
Public Servant	22	18.33
Others	37	30.83
Age		
15-20	5	4.17
20-25	29	24.17
26-30	22	18.33
31-35	10	8.33
36-40	12	10
41-45	11	9.17
46-50	11	9.17
51-55	10	8.33
56-60	4	3.33
>60	6	5

Based on Table 1, the characteristics of the respondents in this study can be described as follows: based on gender, the respondents were dominated by women with 71 respondents (59.17%), with educational background dominated by Bachelor (S1) with 51 respondents (42.50%), with occupation dominated by private employees with 40 respondents (33.33%), with the age range dominated by 20-25 year age range with 29 respondents (24.17%).

**Table 2.** Validity Test Results

Variable	Dimension	Indicators	Correlation Coefficient	Marks
Service Quality (X <sub>1</sub> )	Reliability (X <sub>1.1</sub> )	Providing fast and appropriate services (X <sub>1.1.1</sub> )	0.789**	Valid
		Providing services as promised (X <sub>1.1.2</sub> )	0.804**	Valid
		Providing appropriate examination and treatment services (1.1.3)	0.798**	Valid

	Responsiveness (X <sub>1.2</sub> )	Responsive staff helps patients (X <sub>1.2.1</sub> )	0.866**	Valid
		Provides clear information (X <sub>1.2.2</sub> )	0.782**	Valid
		Handles complaints well (X <sub>1.2.3</sub> )	0.821**	Valid
	Assurance (X <sub>1.3</sub> )	Doctor's ability to diagnose disease (X <sub>1.3.1</sub> )	0.729**	Valid
		Competence of staff medical treatment in dealing with patients (X <sub>1.3.2</sub> )	0.693**	Valid
		Polite and friendly service (X <sub>1.3.3</sub> )	0.848**	Valid
	Empathy (X <sub>1.4</sub> )	Caring for patients (X <sub>1.4.1</sub> )	0.852**	Valid
		Officers are easy to communicate with (X <sub>1.4.2</sub> )	0.850**	Valid
		Service without discrimination (X <sub>1.4.3</sub> )	0.755**	Valid
Tangibles (X <sub>1.5</sub> )	Clean, tidy, and comfortable waiting room (X <sub>1.5.1</sub> )	0.864**	Valid	
	Clean and neat appearance of staff (X <sub>1.5.2</sub> )	0.884**	Valid	
Hospital Image (X <sub>2</sub> )	-	Trust (X <sub>2.1</sub> )	0.842**	Valid
	-	Contribution to welfare (X <sub>2.2</sub> )	0.788**	Valid
	-	Positive opinion (X <sub>2.3</sub> )	0.882**	Valid
	-	References in referral health services (X <sub>2.4</sub> )	0.832**	Valid
Online Queue (Z)	-	Arrival characteristics (Z <sub>1</sub> )	0.936**	Valid
	-	Queuing discipline (Z <sub>2</sub> )	0.938**	Valid
	-	Service facilities (Z <sub>3</sub> )	0.954**	Valid
Patient Satisfaction (Y)	-	Satisfaction with officers (Y <sub>1</sub> )	0.899**	Valid
	-	Satisfaction with services (Y <sub>2</sub> )	0.918**	Valid
	-	Satisfaction with service skills (Y <sub>3</sub> )	0.928**	Valid

The validity and reliability test used 30 respondents outside of the 120 respondents in this study. The validity test used the Pearson Product Moment correlation with a correlation coefficient  $\geq 0.1793$ . The validity test results of the indicators used in this study show the correlation coefficient between each indicator with a total score of  $\geq 0.1793$ , meaning each indicator can be declared valid (see Table 2).

**Table 3.** Reliability Test Results

Variable	Cronbach Alpha	Marks
Service Quality (X1)	0.959	Reliable
Hospital Image (X2)	0.838	Reliable
Online Queue (Z)	0.936	Reliable
Patient Satisfaction (Y)	0.900	Reliable

A variable is said to be reliable if Cronbach's Alpha coefficient  $\geq 0.6$  means a reliability level of 0.6 indicates the reliability of a construct (Sugiyono, 2017). The reliability test results of the indicators used in this study showed a Cronbach's Alpha value above 0.6, which means that all indicators were reliable (see Table 3).

**Table 4.** Discriminant Validity

Variable	Average Variance Extracted (AVE)	$\sqrt{\text{AVE}}$	Service Quality	Hospital Image	Online Queue	Patient Satisfaction
Service Quality	0.636	0.797	0.798			
Hospital Image	0.738	0.859	0.703	0.859		
Online Queue	0.796	0.892	0.521	0.534	0.892	
Patient Satisfaction	0.842	0.918	0.789	0.637	0.533	0.918

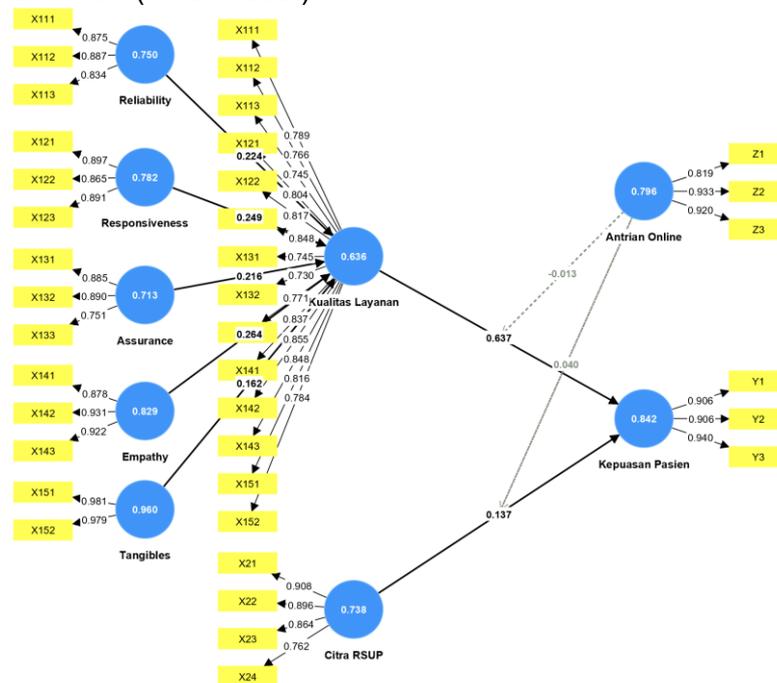
The results of the loading factor evaluation show that all variables meet convergent validity because they have a loading factor value above 0.50. This study uses a minimum loading factor value of 0.50, according to Hair et al. (2016). Table 4 shows the data has good discriminant validity because the four variables have an AVE value greater than 0.50.

**Table 5.** Composite Reliability

Variable	Composite Reliability
Service Quality	0.961
Hospital Image	0.918
Online Queue	0.921
Patient Satisfaction	0.941

Table 5 shows that all variables have good reliability with a composite reliability value above 0.70.

**Figure 2.** Structural Model (Inner Model)



In Figure 2, it is explained that the service quality variable has several indicators, namely reliability, responsiveness, assurance, empathy, and tangibles. Another independent variable in this research is hospital image, with the dependent variable being patient satisfaction. This research considers online queues as variables that moderate the

impact of service quality and hospital image on patient satisfaction.

**Table 6.** R-Square Values

Variable	R Square
Patient Satisfaction	0.652
Service Quality	1

$$\begin{aligned}
 Q^2 &= 1 - (1 - R1^2) (1 - R2^2) \\
 &= 1 - (1 - 0,652) (1 - 1) \\
 &= 1
 \end{aligned}$$

The coefficient of determination (R-square) indicates a decisive criterion. An R-square value greater than 0.50 is classified as a robust model (Hair et al., 2016). Q-Square predictive relevance shows that the model formulation gives an excellent meaning; the model can explain 100% (see Table 6).

**Table 7.** Hypothesis Testing Results

Variable	Original Sample (O)	T Statistics ( O/STDEV )	P Values	Marks
Hospital Image → Patient Satisfaction	0.137	1.062	0.288	Not Significant
Service Quality → Patient Satisfaction	0.637	4.422	0.000	Significant
Online Queue & Service Quality → Patient Satisfaction	-0.013	0.103	0.918	Not Significant
Online Queue & Hospital Image → Patient Satisfaction	0.040	0.320	0.749	Not Significant

Table 7 shows that 3 (three) hypotheses are not significant (the t-statistics value is below 1.98, and the significant value is greater than 0.05). The first hypothesis (H1) is that service quality positively affects patient satisfaction at RSUP Prof. dr. I Goesti Ngoerah Gde Ngoerah was declared accepted (t-statistics value (4.422) above the value of 1.98 and significant value (0.000) is less than 0.05). The second hypothesis (H2) is that hospital image positively affects patient satisfaction at RSUP Prof. dr. I Goesti Ngoerah Gde Ngoerah was declared rejected (the value of t-statistics (1.062) was below the value of 1.98 and the significant value (0.288) is greater than 0.05). The third hypothesis (H3) is that online queues moderate the relationship between service quality and patient satisfaction at RSUP Prof. dr. I Goesti Ngoerah Gde Ngoerah was declared rejected (t-statistics value (0.103) below the value of 1.98 and significant value (0.918) is greater than 0.05). The fourth hypothesis (H4) is that online queues moderate the relationship between hospital image and patient satisfaction at RSUP Prof. dr. I Goesti Ngoerah Gde Ngoerah was declared rejected (the value of t-statistics (0.320) was below the value of 1.98 and the significant value (0.749) is greater than 0.05).

## DISCUSSION

The results of hypothesis testing indicate that service quality has a positive and significant effect on patient satisfaction. Hence, the analysis of this research model shows that a better quality of service in the hospital will increase patient satisfaction. The results of this study are in line with Abidin (2016), Safitri et al. (2016), Rosalia & Purnawati (2018), Heri & Misniari (2019), Anfal (2020), Lelono & Vikaliana (2020), and Triyadi et al. (2021).

Conversely, hospital image does not affect patient satisfaction. This means that the hospital's image, even though it is excellent, does not impact patient satisfaction. The results showed that the trust indicator obtained the highest outer loading results, but a high level of patient trust in the hospital did not impact patient satisfaction. This is probably due to RSUP Prof. dr. I Goesti Ngoerah Gde Ngoerah is a tertiary hospital where patients who visit the hospital are referred patients from hospitals with classes below it, thereby forming the perception and expectations of patients to get a more significant recovery compared to visits to the other hospital. The results of this study are different from Safitri et al. (2016), Anfal (2020), and Triyadi et al. (2021), who state that organizational image has a positive and significant effect on customer satisfaction. However, this research is in line with Lutfiyani and Soliha (2019) who stated that there was no significant effect between the company image variable on satisfaction, and Basalamah et al. (2021) who indicated that image did not affect patient satisfaction.

The results also found that online queues do not moderate the relationship between service quality and hospital image on patient satisfaction. This concludes that patients do not mind the long waiting time to get service or waiting room facilities and assume that the hospital image is not essential and is unrelated to patient satisfaction. Still, if the quality of services doctors and nurses provide is very good, the patient will be satisfied. This is likely due to online queuing being only one aspect of the patient experience, and other factors such as the skills of the medical staff, the quality of the medical care provided, the ability of the hospital to respond well to patient needs, clear, and compelling communication between hospital staff hospitals and patients, hospital cleanliness, patient safety, and comfort can also contribute to overall patient satisfaction. The relatively new implementation of online queues probably makes most patients unfamiliar with the technology used, so that the impact on improving the relationship between service quality and patient satisfaction is limited.

## **CONCLUSION**

Service quality has a positive and significant effect on customer satisfaction. This finding illustrates that the better the service quality, the more customer satisfaction will increase. Therefore, organizations should prioritize enhancing various aspects of service quality, such as reliability, responsiveness, assurance, empathy, and tangibles, to foster greater customer satisfaction.

On the other hand, the organizational image does not affect customer satisfaction. This finding indicates that an excellent organization's image alone does not directly influence customer satisfaction. It suggests that while having a positive image is beneficial for other aspects of the organization, it does not necessarily translate to higher customer satisfaction. Organizations may need to focus more on the direct interactions and experiences customers have with their services.

Furthermore, online queues do not moderate the relationship between service quality and customer satisfaction. This finding illustrates that although customers appreciate the convenience of online queues, this feature alone cannot enhance the impact of service quality on customer satisfaction. This suggests that while online queues are a useful tool, they should be part of a broader strategy to improve overall service quality rather than a standalone solution.

Additionally, online queues do not moderate the relationship between organizational image and customer satisfaction. This finding illustrates that even though customers may favor online queues and have high trust in the organization, this does not strengthen the relationship between organizational image and customer satisfaction. Organizations

should recognize that while online queues contribute to operational efficiency and customer convenience, they do not significantly influence how organizational image impacts customer satisfaction.

The results of this study are empirical evidence for the theory that underlies the relationship between the variables described in the research model. This study has proven that service quality has a positive and significant effect on customer satisfaction, in line with research by Abidin (2016), Safitri et al. (2016), Rosalia & Purnawati (2018), Heri & Misniari (2019), Anfal (2020), Lelono & Vikaliana (2020), and Triyadi et al. (2021). Organizational image has no significant effect on customer quality; this is not in line with research by Safitri et al. (2016), Anfal (2020), and Triyadi et al. (2021), where an organization's image has a positive and significant effect on customer satisfaction. However, this study's results align with the research of Lutfiyani & Soliha (2019) and Basalamah et al. (2021), where there is no significant effect between organization's image on customer satisfaction. Online queues do not moderate the relationship between service quality and customer satisfaction, and online queues do not moderate the relationship between organizational image and customer satisfaction. The results of this study can be used in the health service business. Organizational image has not been able to be used as a basis for increasing customer satisfaction.

In conclusion, while service quality directly influences customer satisfaction, organizational image and online queues do not play moderating roles in these relationships. This suggests that organizations should focus more on tangible service improvements and direct customer interactions to enhance satisfaction, rather than relying solely on image or technological conveniences like online queues. The implications of this research for hospital business practices, especially at RSUP Prof. dr. I Goesti Ngoerah Gde Ngoerah, include the continuous improvement of the quality of human resources at the hospital. This will enable the hospital to provide excellent services for the health of the wider community. As the central hospital on the island of Bali, RSUP Prof. dr. I Goesti Ngoerah Gde Ngoerah must continually enhance the quality of its services to maintain and improve the health level of the Balinese people. A healthy population will also lead to an increase in the overall welfare of the people. Suggestions for further research are expected to examine other factors that can influence consumer satisfaction, such as product price, facilities and infrastructure, and drug quality.

#### **LIMITATION**

It is necessary to develop the model by adopting more indicators from different sources. This study uses tertiary hospitals as research locations where patient expectations differ from secondary hospitals. For future research, samples from several hospitals, especially secondary hospitals, must be taken.

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#### **DECLARATION OF CONFLICTING INTERESTS**

The researchers states truthfully and is aware that we do not have a conflict of interest in the writing or research of this manuscript.

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