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Understanding Patient Revisit Intention and Word of Mouth in Healthcare Services: A SERVQUAL-Based Framework with Higher-Order Constructs

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Abstract

Healthcare quality plays a crucial role, but improving access to healthcare must be prioritized alongside population growth to ensure equitable and sustainable accessibility. This study investigates the impact of hospital service quality on perceived value and patient satisfaction. Additionally, perceived value affects satisfaction, revisit intention, and word of mouth, while patient satisfaction impacts revisit intention and word of mouth. This study employs a quantitative method using an online survey of 174 respondents across five cities in Indonesia. The research data were analyzed using multivariate statistics, specifically variance-based structural equation modeling. The outcomes of the analysis indicate that all the hypotheses proposed are statistically supported. Service quality in hospitals positively and significantly affects perceived value and satisfaction. Furthermore, perceived value affects satisfaction, revisit intention, and word of mouth. Satisfaction also significantly affects revisit intention and word of mouth. This study develops a service quality framework within the literature on hospital service quality and measurement using Higher-Order Constructs. Hospitals can enhance patients' perceived value and foster sustainable satisfaction by focusing on the service quality framework. This strategy is crucial in addressing competition in the healthcare market, particularly in attracting and retaining patients amid the ongoing dynamics of healthcare system reforms.

Keywords: Perceived Value; Revisit Intention; Satisfaction; SERVQUAL; Word of Mouth,

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INTRODUCTION

Competitive mapping in any industry always focuses on creating customer satisfaction. To support sustainable business growth, the goal is to build consumer preference and loyalty toward products or services. Customer loyalty is a central element in marketing strategies. In the healthcare domain, patient loyalty can be considered an adaptation of customer loyalty in the non-healthcare sector. From an economic perspective, medical services provided to patients are a form of exchange of labor value between service providers and service

recipients so that patients can be positioned as customers (Liu et al., 2021). Medical services fall under the category of imperfect public goods, as they are provided to individuals who come to hospitals for treatment or care. However, healthcare services have unique characteristics that distinguish them from other sectors. Patients do not visit hospitals out of personal preference to return. Therefore, consumer loyalty in the healthcare industry has different dynamics compared to other industries.

The relationship between doctors, hospitals, and patients is viewed as a relationship between service providers and consumers, where competition for new consumers needs to be based on massive and mutually beneficial relationships. In healthcare, interactions between patients and hospitals are built on trust, which is reflected in patients' willingness to return to hospital services, both in the form of attitudinal and behavioral loyalty. Patient loyalty provides economic benefits for hospitals, such as reduced costs for acquiring and maintaining new customers, and generates positive social impacts and health value for patients. Additionally, patients who are loyal due to the quality of hospital services generally tend to pay more, share positive information (word-of-mouth), have higher purchase intentions, and resist offers from other service providers.

Healthy and prosperous lives are one of the main goals of the Sustainable Development Goals (SDGs), which are international and nationwide commitments to enhance the welfare of humanity. To achieve these targets, the availability and quality of health services, including the number of hospitals, play an important role. Based on Indonesia's health profile data, the number of general hospitals increased by 12.46% from 2019 to 2023, with a total of 2,636 hospitals consisting of central government-owned hospitals (9.2%), local government-owned hospitals (32.2%), and private hospitals (58.6%) (Alfathi, 2024). This increase indicates progress, but efforts to improve access to healthcare services must continue with population growth, through collaboration among various stakeholders to ensure equitable and sustainable accessibility. Several studies have highlighted gaps in healthcare services provided by public and private hospitals (Alumran et al., 2021; Rout et al., 2021; Shabbir et al., 2016). The intense competition between private and public hospitals highlights the matter of service quality (SERVQUAL).

A SERVQUAL framework is essential for understanding how hospitals provide the best services to patients. Therefore, researchers have successfully developed SERVQUAL frameworks, particularly in hospital services (Endeshaw, 2021; Kalhor et al., 2021; Nguyen et al., 2021; Woo & Choi, 2021). For example, Nguyen et al. (2021) developed SERVQUAL dimensions: function, emotion, social influence, and trust. Other researchers have added dimensions such as infrastructure and personalized attention (Ajarmah et al., 2017; Swain & Kar, 2017), administrative procedures and clinical procedures (Swain & Kar, 2017; Swathi et al., 2019), and trustworthiness (Ameryoun et al., 2017; Swain & Kar, 2017). Therefore, this study develops the SERVQUAL framework from Nguyen et al. (2021) by extending the physical environment quality dimension from Wu et al. (2016) as a novelty in the hospital SERVQUAL literature.

Empirical evidence consistently demonstrates that the dimensions of SERVQUAL, comprising service practices, staff friendliness and attention, and the physical environment of the hospital, are essential of patient satisfaction (Woo & Choi, 2021), creating perceived value (Habibi & Rasoolimanesh, 2021) thereby increasing the desire to revisit the hospital and share positive experiences through word-of-mouth (WOM) (Nguyen et al., 2021). Additionally, perceptions of the value received from hospital services influence patients' willingness to advise services verbally and enhance their intention to revisit the hospital (Fattahi et al., 2022; Nguyen et al., 2021). However, some scholars have failed to prove the contribution of perceived value to satisfaction (Nguyen et al., 2021) and satisfaction to patient loyalty (Liu et al., 2021).

Therefore, this study explores the nexus between SERVQUAL, perceived value, satisfaction, revisit intention, and WOM recommendations, creating a complex and mutually supportive ecosystem that shapes patient behavior within the hospital service sector.

LITERATURE REVIEW

SERVQUAL

Healthcare quality is a complicated concept encompassing various dimensions to ensure patient care meets or exceeds expectations. The conceptualization of healthcare quality often involves technical and practical aspects. Technical quality relates to the clinical and medical exactness of the services provided, while practical quality relates to how services are delivered, including interactions between healthcare providers and patients (Prasad & Ghosal, 2019). The ingrained complexity of healthcare services, which involve high risks, requires a comprehensive approach to evaluating SERVQUAL (Endeshaw, 2021).

Several healthcare service benchmarks have been created, with the SERVQUAL model being one of the most widely utilized frameworks. This model is often adapted to specific healthcare contexts, evaluating SERVQUAL based on "tangibles, reliability, responsiveness, assurance, and empathy" (AlOmari, 2021; Prasad & Ghosal, 2019). Additionally, new frameworks such as "PATIENTQUAL" and "CIRMQUAL" have been proposed to incorporate user expectations and provide a more holistic assessment of SERVQUAL (Datt et al., 2025). These models emphasize the importance of patient feedback and the alignment of healthcare services with patient expectations to improve overall SERVQUAL and patient satisfaction (Datt et al., 2025). Furthermore, the

study by Nguyen et al. (2021) partially examined the dimensions of SERVQUAL, consisting of function, emotion, social influence, and trust to explain patient satisfaction and perceived value. The results showed that the emotion dimension did not influence perceived value, and function did not influence patient satisfaction. This study re-examined the dimensions developed by Nguyen et al. (2021), extending the physical environment quality dimension from the study by Wu et al. (2016).

Healthcare SERVQUAL dimensions are highly diverse and can include clinical quality, infrastructure quality, relationship quality, and managerial quality (Datt et al., 2025). Clinical quality focuses on the medical and technical aspects of care, while infrastructure quality relates to the physical environment and facilities. Relationship quality involves interactions between patients and healthcare providers, emphasizing communication, empathy, and trust. Managerial quality pertains to the efficiency and significance of healthcare management practices (Datt et al., 2025).

Measuring these dimensions often involves patient surveys and feedback mechanisms to capture their perceptions and experiences. Structured questionnaires and concept mapping identify key factors influencing patient satisfaction and SERVQUAL (Darzi et al., 2023; Wilberforce et al., 2018). For example, provider attitude, technical competence, accessibility, and effectiveness are critical attributes of patient satisfaction (Ng & Luk, 2019). By systematically collecting and analyzing patient feedback, healthcare providers can determine areas for advancement and execute plans to enhance SERVQUAL (Nguyen et al., 2021).

Perceived Value

In healthcare, perceived value is not solely determined by economic factors but also by psychosocial and organizational elements. Patients and healthcare providers value professionalism, competence, and soft skills such as communication and empathy (Marino & Capone, 2023). Additionally, the quality of healthcare services and an effective organizational culture are crucial in shaping perceived value (Marino & Capone, 2023). Integrating patient experiences into the value equation is increasingly recognized, highlighting the importance of patient-centered care and shared decision-making (Laubscher et al., 2025; Rüter & Meier, 2022). A holistic approach to perceived value aims to optimize patient outcomes while managing costs, thereby aligning the interests of patients, service providers, and paying parties (Borzée et al., 2025; Gongora-Salazar et al., 2024). Understanding and measuring perceived value from various perspectives can improve healthcare delivery and enhance patient satisfaction (Marino & Capone, 2023).

Satisfaction

Patient satisfaction in healthcare is a complicated concept that reflects the quality of care from the patient's perspective. It is important to evaluate healthcare services, identify improvement areas, and ensure that patients' needs and expectations are met. Satisfaction is often considered a standard of the discrepancy between patients' expectations and real experiences (Aiken et al., 2021). Patient satisfaction goes beyond individual experiences; it is a key indicator of healthcare quality and a driver of quality improvement programs (Ali & Dzandu, 2023). High ranks of patient satisfaction are associated with more suitable clinical effects, higher patient obedience, loyalty, and referrals (Ng & Luk, 2019).

Besides, satisfaction surveys deliver practical understandings into the powers and liabilities of healthcare systems, helping policymakers and healthcare professionals make informed decisions to improve services (Abdi et al., 2024; Nikolaou et al., 2022). Factors such as waiting times, installation cleanliness, and the implementation of new technologies also significantly influence patient satisfaction (Abdi et al., 2024; Nikolaou et al., 2022). Overall, comprehending and enhancing patient satisfaction is crucial for achieving higher standards of care and confirming that healthcare services are patient-centered and effective.

Word of Mouth

WOM in healthcare refers to the informal discussion of information and opinions about healthcare services and providers among patients and their social networks. This communication can significantly influence patient behavior, including their choice of healthcare providers and their overall satisfaction with medical services. WOM in healthcare are affected by several characteristics, including the quality of medical services, patient satisfaction, and the perceived credibility of information sources (Pauli et al., 2023). Theories such as cognitive dissonance, the stability of weak relations, and perceived risk are often used to understand the dynamics of WOM in this sector (Pauli et al., 2023). Also, the emergence of electronic word of mouth through online reviews and social media has expanded the reach and impact of WOM, making it a crucial element in modern healthcare marketing strategies (Araújo et al., 2025). Information credibility and sources' reliability play a critical role in how WOM influences patient choices (Chen et al., 2020). Overall, understanding and leveraging WOM can help healthcare providers improve patient satisfaction, strengthen brand image, and gain a competitive edge in the market.

Revisit Intention

Revisit intention is a form of patient loyalty that explains patients' ongoing commitment and involvement toward healthcare providers, which is crucial for business success and positive health outcomes. Revisit intention

behavior is affected by miscellaneous aspects, including patient satisfaction, trust, perceived value, and the quality of healthcare services (Liu et al., 2021; Nguyen et al., 2021). Satisfaction with healthcare services, such as the quality of nursing care and overall hospital services, directly influences patient loyalty (Chen et al., 2022). Trust and commitment are also significant determinants, where trust enhances commitment, strengthening loyalty (Abekah-Nkrumah et al., 2021; Kamra, 2021).

Building patient loyalty is not just about providing quality healthcare; it requires meaningful engagement at various touchpoints, including direct visits, phone interactions, and social media platforms (Moreira et al., 2023). Loyalty programs and health promotion initiatives can strengthen patient loyalty by enhancing the adaptability and well-being of the healthcare ecosystem (Agustiawan, 2022). Healthcare workers' emotional competence in building respect and good relationships with patients is crucial for improving patient loyalty, especially in competitive environments (Mai et al., 2024). Overall, patient loyalty is a multifaceted concept encompassing various elements of the patient experience, satisfaction, trust, and perceived value, all of which contribute to long-term relationships between patients and healthcare providers.

SERVQUAL: Its Effect on Perceived Value and Satisfaction

SERVQUAL influences patients' perceptions of perceived value. Habibi and Rasoolimanesh (2021) define perceived value as "the trade-off between perceived benefits and perceived sacrifice." High-quality services lead patients to believe that the costs incurred are commensurate with the benefits received, thereby enhancing their overall perception of service value (Boakye et al., 2017; Guo et al., 2020; Özer et al., 2017; Upamannyu et al., 2022). Various dimensions of SERVQUAL, such as emotional value and medical staff professionalism, have varying influences on perceived value. Empirical evidence shows that SERVQUAL, emotional value, and professionalism significantly influence perceived value from the patient's perspective (Özer et al., 2017).

The literature on patient perceptions of SERVQUAL in healthcare services refers to patients' assessments of SERVQUAL before determining to use healthcare services (Endeshaw, 2021). Meanwhile, patient satisfaction relates to comparing expectations and actual service performance (Aiken et al., 2021). Hospital SERVQUAL has been proven to contribute directly to increased patient satisfaction. This result is reinforced by several studies showing that various dimensions of SERVQUAL, including reliability, assurance, physical aspects, empathy, and responsiveness, significantly affect patient satisfaction levels (Abdullah et al., 2023; Ali, 2018; K.S. et al., 2023; Singh & Dixit, 2020). Furthermore, patient satisfaction often mediates the relationship between SERVQUAL and various outcomes, such as clinical outcomes and patient behavioral intentions. For example, high-quality clinical, diagnostic, and administrative services improve patient satisfaction and improve care outcomes (K.S. et al., 2023). Therefore, this study hypothesizes:

H_1: Hospital SERVQUAL positively affects patients' perceived value.

H_2: Hospital SERVQUAL positively affects patient satisfaction.

Perceived Value: Its Effect on Satisfaction, Intent to Return to the Hospital, and WOM

Several studies have noted a strong relationship between perceived value and the intention to return in various contexts, including healthcare. For example, Lin and Yin (2022) reported that perceived value significantly influences patient loyalty, indicating that a high sense of value leads to a desire to return to the hospital. Additionally, Bhattacharyya et al. (2024) emphasize that high perceived value, influenced by the quality of care and emotional attention provided, directly contributes to an increased likelihood of patients returning to receive medical services. These findings indicate that perceived value not only shapes patient satisfaction but also plays a role in influencing future behavior, such as the intention to revisit healthcare facilities. This statement is reinforced by the study by AlOmari and A. Hamid (2022), which demonstrates that patient satisfaction leads to the intention to revisit and willingness to recommend hospital services.

Moreover, the study by Fattahi et al. (2022) discusses how patient engagement behavior rooted in perceived value significantly leads to a positive health care experience shared through positive WOM. This finding signals that perceived value can shape patients' behavior to share positive experiences about health care services. Furthermore, a strong positive correlation exists between perceived value and patient satisfaction levels. When patients perceive that the services they receive have high value, their satisfaction tends to increase significantly (Boakye et al., 2017; Guo et al., 2020; Wu et al., 2008). Therefore, this study hypothesizes:

H_3: Perceived value has a positive effect on patient satisfaction intention

H_4: Perceived value has a positive effect on intention to revisit the hospital

H_6: Perceived value has a positive effect on WOM behavior

Patient Satisfaction: Its Effect on WOM and Revisit Intention to the Hospital

Patient satisfaction is key to forming positive WOM and the intention to return to healthcare facilities. Previous studies have shown that higher levels of patient satisfaction significantly contribute to an increased

likelihood of patients recommending the hospital to others and making repeat visits. For example, patient satisfaction has been proven to significantly influence trust, WOM, and revisit intentions, with WOM acting as an important mediator in the relationship between satisfaction and revisit intentions (Nuhu et al., 2025). Furthermore, patient satisfaction formed through SERVQUAL, communication effectiveness, and the overall experience during their stay at the hospital have a positive correlation with WOM and higher revisit intentions (Park et al., 2021). Satisfied patients are more likely to share recommendations with others, strengthening healthcare institutions' brand image and reputation (Abu-Hasheesh et al., 2024; Ariffin et al., 2022). Additionally, several studies confirm that patient satisfaction directly drives the intention to revisit, particularly in meeting future healthcare needs (Machmud et al., 2024; Mandagi et al., 2024; Park et al., 2021). Therefore, this study hypothesizes:

H_5: Patient satisfaction positively affects WOM behavior

H_7: Patient satisfaction positively affects the intention to revisit the hospital

Based on literature reviews and findings from previous studies, this study believes that hospital SERVQUAL plays a significant role in improving perceived value and patient satisfaction. High perceived value also contributes to satisfaction, which motivates patients to recommend hospital services through WOM and demonstrates intent to revisit when needing healthcare services. Additionally, patients who are satisfied with the services they receive are more likely to be willing to use hospital services again in the future. Therefore, the study models the framework of revisit intention and WOM behavior in the hospital domain as shown in Figure 1.

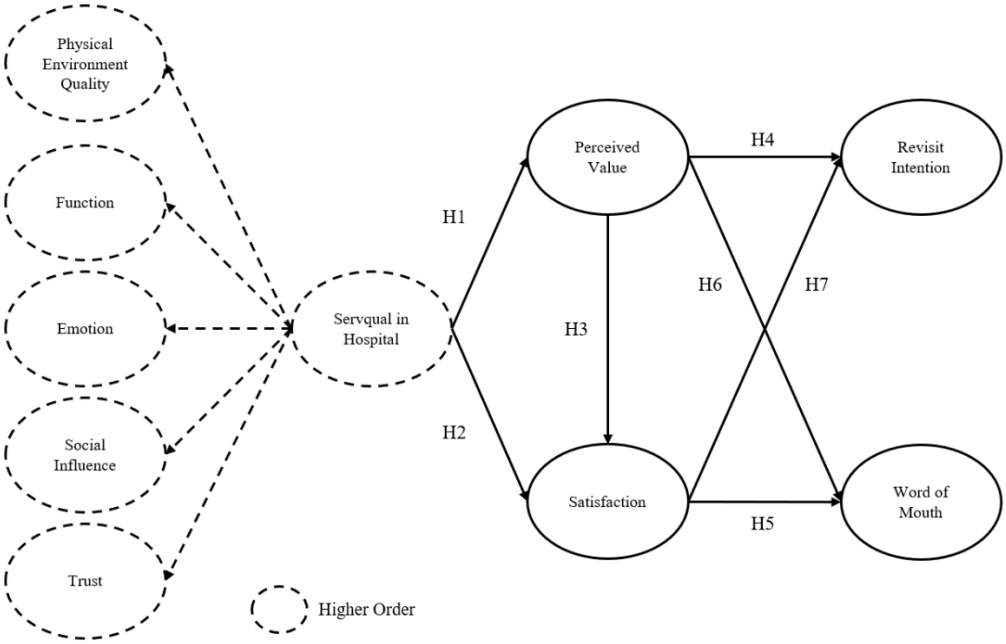

Figure 1. Conceptual Framework

METHOD

This study develops a conceptual framework to explain repeat visit intentions and WOM behavior in healthcare services. The main factors analyzed include SERVQUAL, perceived value, and patient satisfaction. Therefore, a quantitative approach was used to test the conceptual framework in healthcare services across five cities: Jakarta, Bogor, Tangerang, Depok, and Bekasi. Since the number of patients in these five cities was not identified (infinite), the sample size of 360 was determined based on 10 x 36 (number of indicators) (Hair et al., 2019). Purposive sampling was applied in this study because respondents were selected based on the following criteria: having visited private and government hospitals at least twice to receive inpatient or outpatient services, and residing in the five specified cities. Data were obtained from 174 respondents during the questionnaire distribution, resulting in a data collection success rate of 48%.

The research design employed a cross-sectional survey with data collection from the targeted sample. A structured questionnaire was distributed online and completed independently by the respondents. The questionnaire was separated into three main sections: (1) screening questions to ensure respondent eligibility based on sample criteria; (2) demographic characteristics; and (3) structured statements to the research hypotheses.

Professional translators translated the research instruments from English to Indonesian. Language experts conducted further validation to ensure clarity of language for the general respondent population and healthcare practitioners (doctors and nurses) to ensure content appropriateness within the medical context. Respondents were

asked to rank their answers on a 5-point Likert scale, ranging from "(1) strongly disagree" to "(5) strongly agree." The researchers explained the objective of the research and guaranteed the confidentiality of respondents' identities to minimize potential social desirability bias.

Hospital SERVQUAL was measured using a higher-order construct (HOC) with a reflective-reflective model. In contrast, other variables were measured using a lower-order construct (LOC) with a reflective model. Details of variable operationalization are shown in Table 1.

Table 1. Operationalization of Research Variables

Construct	Sub-Construct	Item	Reference
SERVQUAL	Function	F1. My expectations regarding the doctor at the hospital visited were met	Nguyen et al. (2021)
		F2. My expectations regarding the receptionist at the hospital visited were met	
		F3. My expectations regarding the cleanliness of the hospital visited were met.	
		F4. My expectations regarding the working hours at the hospital visited were met	
		F5. My expectations regarding the diagnostic examination at the hospital visited were met	
	Emotion	EM1. A positive post-visit experience was provided by using the services of the hospital visited	Nguyen et al. (2021)
		EM2. It is believed that the best effort for every patient is made by the hospital visited	
		EM3. It is felt that the experience of each patient is known by the hospital visited	
	Social influence	SI1. It is understood that positive impressions of the hospital's services are consistently given by other patients	Nguyen et al. (2021)
		SI2. The ability to provide the best service is not affected by the number of other patients	
		SI3. It is understood by the hospital visited that my opinion of their services is influenced by the experiences of other patients.	
	Trust	TR1. A good reputation is held by the hospital visited	Nguyen et al. (2021)
		TR2. The staff at the hospital visited were perceived as honest and trustworthy	
		TR3. Every patient's problem was addressed with care by the hospital staff who visited	
		TR4. The highest quality of medical care is offered by the hospital visited.	
		TR5. A commitment to meeting the needs of every patient is shown by the hospital visited	
	Physical Environment Quality	PEQ1. The physical environment at the hospital visited is considered to be excellent.	Wu et al. (2016)
		PEQ2. A high standard is maintained for the physical environment at the hospital visited.	
		PEQ3. A positive impression was made by the quality of the physical environment at the hospital visited	
Perceived value		CPV1. High-quality services are provided by the hospital visited	Nguyen et al. (2021)
		CPV2. The hospital visited can be reached easily	
		CPV3. Overall, satisfaction is felt with the costs charged by the hospital visited	
		CPV4. Reasonable prices for services are offered by the hospital visited.	
		CPV5. The hospital services received were considered worth the money that was spent.	
Satisfaction		CS1. Satisfaction was experienced with the healthcare services that were provided.	Nguyen et al. (2021)
		CS2. All of my expectations were met by the hospital I visited	

Construct	Sub-Construct	Item	Reference
		CS3. Compared to other hospitals, a high level of satisfaction with the hospital visited is felt.	
		CS4. The choice to use the hospital visited is proven to have been a wise decision.	
		CS5. Overall, satisfaction is felt with the hospital visited	
Revisit intention		RI1. The hospital visited is considered the first choice among all other hospitals.	Nguyen et al. (2021)
		RI2. The available healthcare services will continue to be used, and additional services offered by the hospital visited will be purchased	
		RI3 A good relationship with the hospital visited will be maintained in the future	
Word of mouth		WM1. The hospital visited will be recommended to others	Nguyen et al. (2021)
		WM2. Information about the hospital visited will be shared with many people over other hospitals	
		WM3. Positive things will be said about the hospital visited	
		WM4. Pride is taken in telling others about the healthcare services offered by the hospital visited	

The questionnaire data were evaluated using SPSS software for profile respondent and SmartPLS version 4 software for statistical hypothesis testing. This study used multivariate statistics (variance-based structural equation modeling: PLS-SEM). PLS-SEM analysis consisted of outer model and inner model evaluation. The outer model was used to measure convergent validity, discriminant validity, and reliability. Indicators are supposed to be valid when the loading factor (LF) is > 0.70 and the Average Variance Extracted (AVE) is > 0.50 (Hair Jr et al., 2022). Meanwhile, discriminant validity uses the Heterotrait-Monotrait Ratio (HTMT) method with a correlation ratio value of < 0.90 to accept discriminant validity (Hair Jr et al., 2022). The HTMT method was chosen because it is more sensitive and reliable than other methods. Furthermore, the indicators were deemed reliable when the Composite Reliability (rho-a) and Cronbach's Alpha (CA) values were > 0.70 (Hair Jr et al., 2022).

The evaluation of the inner model in PLS-SEM consists of five stages. Stage one: assessment of collinearity issues in the structural model by referring to the Variance Inflation Factor (VIF) value < 5 (Hair Jr et al., 2022). The second stage involves testing hypotheses at a significance level of 5% using a two-tailed test, with a subsample of 10,000 and a confidence interval method of percentile bootstrap (Hair Jr et al., 2022). Third and fourth stages: testing the model's explanatory power, which consists of R-Square (R^2) and effect size f-square (f^2). Interpretation of f^2 values: ≥ 0.02 (weak), ≥ 0.15 (moderate), and ≥ 0.35 (strong) (Hair Jr et al., 2022). Fifth stage: testing the predictive power of the structural model. This study uses the PLS-predict method (Hair Jr, 2021; Hair Jr et al., 2022; Shmueli et al., 2019).

RESULT

Respondent Demographics

Based on the demographic data in Table 2, most respondents were in the productive age range. The most significant number of respondents were aged 23–28 years (32%), followed by the 17–22 age group (18%) and those aged over 46 years (17%). It shows that young and early adult age groups were the dominant segments in this study. Regarding gender, most respondents were female (62%), while males accounted for 38%, indicating that female participation in this survey was higher. In terms of occupation, respondents were predominantly private sector employees (53%), followed by students (30%) and professionals (13%). It indicates that most respondents have a work background related to the non-government sector.

Meanwhile, only a small proportion of respondents were government employees (2%) and state-owned enterprise employees (1%). Regarding educational attainment, most respondents had a higher education background. Forty-two percent were university graduates, followed by postgraduate degree holders (24%), while high school graduates accounted for 32% and diploma holders for 2%. It indicates that the respondents in this study have a relatively high level of education. In terms of the time of their last visit to the same hospital, nearly half of the respondents (49%) made their last visit within the last four months, while 26% visited the hospital within the last month. The remainder were spread out between two and three months prior. These findings indicate that most respondents have relatively recent experience with the hospital services being studied.

Table 2. Respondent Demographics

Demographics	F	%
Gender		
17 - 22	31	18%
23 - 28	55	32%
29 - 34	19	11%
35 - 40	22	13%
41 - 46	17	10%
> 46	30	17%
Gender		
Men	66	38%
Women	108	62%
Employment		
State-owned enterprise employee	2	1%
Private sector employee	93	53%
Student	53	30%
Government employee	3	2%
Professional	23	13%
Highest level of education		
High school	55	32%
Diploma	4	2%
Bachelor's	73	42%
Master's degree	42	24%
Last visit to the same hospital		
1 mouth	45	26%
2 mouths	23	13%
3 mouths	21	12%
4 mouths	85	49%

Common Method Bias

Common Method Bias (CMB) is a systematic error in data that arises because the same questionnaire is used to measure research model variables, not because of relationships between constructs (Kock, 2015). This study identified CMB using the "full collinearity – VIF (Variance Inflation Factor)" method. CMB was calculated by creating latent variable scores from all constructs and random values. The results showed that all constructs produced VIF values < 3.3, indicating that this study had no potential for CMB (Table 3).

Table 3. CMB

Latent Variable Score	Random	Benchmark
Emotion	3.167	< 3.3
Function	2.964	< 3.3
Physical Environment Quality	3.008	< 3.3
Revisit Intention	2.043	< 3.3
Satisfaction	3.188	< 3.3
Social Influence	2.242	< 3.3
Trust	2.457	< 3.3
WOM	2.314	< 3.3

Outer Model Assessment

This study measures the validity and reliability of the research instrument using the LOC and HOC approaches to measure the research construct. The LOC measurement consists of service SERVQUAL (emotion, function, physical environment quality, trust, and social influence), perceived value, satisfaction, revisit intention, and WOM. Meanwhile, the HOC measurement measures the SERVQUAL construct with its dimensions. Based on Table 4 and Figure 2, the results of the convergent validity analysis using the LOC approach show that all questionnaire items have LF values > 0.70 and AVE values > 0.50. However, the LF value for item CPV2 = 0.697 < 0.70. This item was retained because the AVE value for perceived value > 0.5, and CA and CR > 0.70. These results indicate that each item can reflect the construct being measured. Regarding reliability testing, each construct yielded CA and CR values > 0.70, indicating that the questionnaire used to measure the constructs has good reliability.

Table 4. Convergent Validity and Reliability (LOC)

Construct	Item	LF	AVE	CA	CR
Emotion	EM1	0.860	0.701	0.786	0.788
	EM2	0.842			
	EM3	0.809			
Function	F1	0.848	0.686	0.885	0.887
	F2	0.819			
	F3	0.833			
	F4	0.795			
	F5	0.844			
Physical Environment Quality	PEQ1	0.913	0.809	0.882	0.885
	PEQ2	0.906			
	PEQ3	0.878			
Social Influence	SI1	0.889	0.734	0.819	0.823
	SI2	0.831			
	SI3	0.850			
Trust	TR1	0.856	0.787	0.932	0.933
	TR2	0.899			
	TR3	0.871			
	TR4	0.890			
	TR5	0.917			
Perceived Value	CPV1	0.762	0.638	0.857	0.865
	CPV2	0.697			
	CPV3	0.840			
	CPV4	0.821			
	CPV5	0.862			
Satisfaction	CS1	0.870	0.760	0.921	0.921
	CS2	0.883			
	CS3	0.868			
	CS4	0.860			
	CS5	0.876			
Revisit Intention	RI1	0.887	0.813	0.885	0.889
	RI2	0.920			
	RI3	0.897			
WOM	WM1	0.889	0.800	0.917	0.921
	WM2	0.872			
	WM3	0.903			
	WM4	0.913			

Furthermore, the validity and reliability results of each SERVQUAL dimension produced values of LF > 0.70, AVE > 0.50, CA, and CR > 0.70. These results explain that SERVQUAL as an HOC is well-formed by five LOCs: emotion, function, physical environment quality, trust, and social influence.

Table 5. Convergent Validity and Reliability (HOC)

HOC	LOC	LF	AVE	CA	CR
SERVQUAL in Hospital	Emotion	0.891	0.731	0.908	0.911
	Function	0.856			
	Physical Environment Quality	0.865			
	Social Influence	0.820			
	Trust	0.842			

Discriminant Validity

Discriminant validity was tested utilizing the HTMT method. As established in Table 6, the correlation ratio between constructs in the structural model was < 0.90, thus fulfilling discriminant validity.

Table 6. Discriminant Validity (HTMT)

	EM	F	CPV	PEQ	RI	CS	SI	TR	WM
EM									
F	0.871								
CPV	0.788	0.723							

	EM	F	CPV	PEQ	RI	CS	SI	TR	WM
PEQ	0.835	0.761	0.790						
RI	0.673	0.656	0.723	0.687					
CS	0.802	0.822	0.760	0.800	0.711				
SI	0.846	0.707	0.788	0.724	0.625	0.654			
TR	0.812	0.685	0.667	0.745	0.594	0.631	0.725		
WM	0.684	0.631	0.761	0.738	0.685	0.712	0.679	0.634	

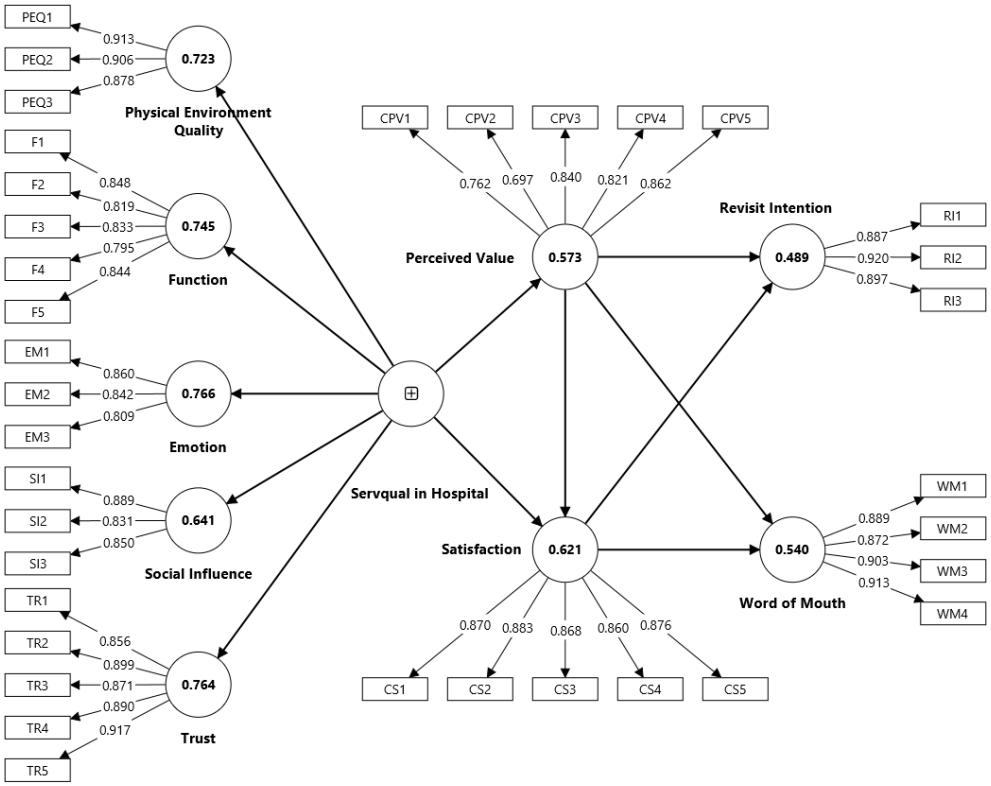

Figure 2. Outer Model

Inner Model Assessment

The first stage in inner model assessment is evaluating collinearity issues in the structural model, which refers to the VIF value. Based on Table 7, all nexuses in the structural model indicate no collinearity matters because the VIF values are < 5 (Hair Jr et al., 2022). Next, statistical hypothesis testing was conducted. This study tested seven hypotheses directly, showing that all research hypotheses were accepted because the p-values were < 0.05 (Table 7). SERVQUAL in a hospital has a positive and significant effect on perceived value ($\beta = 0.765$, $t = 13.639$, $p<0.001$) and patient satisfaction ($\beta = 0.611$, $t = 7.163$, $p < 0.001$), indicating that hospital SERVQUAL plays an important role in shaping patients' perceived value and satisfaction. Furthermore, perceived value was found to affect patient satisfaction ($\beta = 0.218$, $t = 2.280$, $p = 0.023$), revisit intention ($\beta = 0.380$, $t = 4.682$, $p<0.001$), and WOM ($\beta = 0.456$, $t = 5.807$, $p<0.001$). On the other hand, patient satisfaction also has a significant effect on revisit intention ($\beta = 0.382$, $t = 4.680$, $p<0.001$) and WOM ($\beta = 0.343$, $t = 4.413$, $p<0.001$).

Table 7. Hypothesis Testing

Path	VIF	STD	STDEV	T statistics	P values
H1. SERVQUAL in Hospital→Perceived Value	1.000	0.765	0.056	13.639	<0.001
H2. SERVQUAL in Hospital→Satisfaction	2.408	0.611	0.085	7.163	<0.001
H3. Perceived Value→Satisfaction	2.408	0.218	0.096	2.280	0.023
H4. Perceived Value→Revisit Intention	1.885	0.380	0.081	4.682	<0.001
H5. Satisfaction→WOM	1.885	0.343	0.078	4.413	<0.001
H6. Perceived Value→WOM	1.885	0.456	0.079	5.807	<0.001
H7. Satisfaction→Revisit Intention	1.885	0.382	0.082	4.680	<0.001

The next step is to test the model's explanatory power in a structural model, referring to the R^2 and F^2 values. Based on Table 8, SERVQUAL constructs strongly influence perceived value ($f^2 = 1.408$) and satisfaction ($f^2 = 0.413$). Meanwhile, perceived value has a moderate influence on WOM ($f^2 = 0.240$) and revisit intention ($f^2 = 0.151$), but its influence on satisfaction is relatively low ($f^2 = 0.053$). On the other hand, satisfaction also has a low influence on WOM ($f^2 = 0.136$) but a moderate influence on revisit intention ($f^2 = 0.151$).

Furthermore, the R^2 value is 0.585 for perceived value, $R^2 = 0.625$ for satisfaction, $R^2 = 0.540$ for WOM, and $R^2 = 0.489$ for revisit intention. The R^2 value indicates that the research model has a good explanatory ability. Each dependent construct is explained by its independent construct, with a strength ranging from 48.9% to 62.5%, while factors outside the model influence the remainder. It indicates that the structural model is relatively effective.

Table 8. The Model's Explanatory Power

	R-square	F-square	Decision
SERVQUAL in Hospital→Perceived Value	0.585	1.408	Strong
SERVQUAL in Hospital→Satisfaction	0.625	0.413	Strong
Perceived Value→Satisfaction		0.053	Low
Perceived Value→Word of Mouth	0.540	0.240	Moderate
Satisfaction→Word of Mouth		0.136	Low
Perceived Value→Revisit Intention	0.489	0.150	Moderate
Satisfaction→Revisit Intention		0.151	Moderate

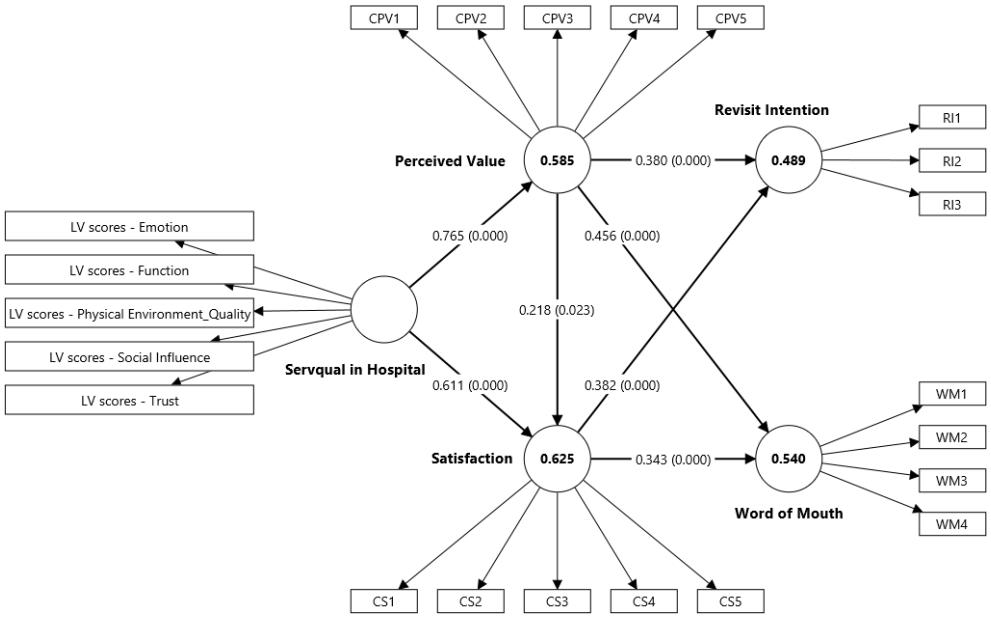

Figure 3. Inner Model

PLS-SEM is a prediction-based statistical analysis. Therefore, this study uses PLSpredict to determine the structural model's predictive power. Shmueli et al. (2019) explain that PLSpredict is "a technique in PLS-SEM used to assess the out-of-sample predictive ability of a model, i.e., how well the model can predict new data outside the sample used to build the model." Additionally, PLSpredict measures how accurately the model predicts the actual values of the dependent variable indicators when applied to new data.

This study uses the RMSE (Root Mean Square Error) measure by comparing the PLS-SEM values with the linear regression (LM) values. The structural model has strong predictions when all PLS-SEM values are < LM. It produces moderate predictions when most values of PLS-SEM < LM, and the model has weak predictive power when most PLS-SEM values are > LM (Shmueli et al., 2019). Based on Table 9, most PLS-SEM values are < LM, so the structural model has moderate predictive power.

Table 9. Predictive Power

Construct	Item	Q^2predict	RMSE		
			PLS-SEM	LM	PLS-SEM < LM
Perceived Value	CPV1	0.533	0.603	0.548	0.055
	CPV2	0.285	0.647	0.654	-0.007
	CPV3	0.303	0.689	0.682	0.007

Construct	Item	Q^2predict	RMSE		
			PLS-SEM	LM	PLS-SEM < LM
	CPV4	0.285	0.697	0.703	-0.006
	CPV5	0.301	0.696	0.700	-0.004
Revisit Intention	RI1	0.268	0.755	0.765	-0.010
	RI2	0.338	0.681	0.690	-0.009
	RI3	0.417	0.569	0.571	-0.002
Satisfaction	CS1	0.462	0.566	0.564	0.002
	CS2	0.554	0.493	0.496	-0.003
	CS3	0.449	0.596	0.570	0.026
	CS4	0.390	0.560	0.555	0.005
	CS5	0.382	0.572	0.573	-0.001
WOM	WM1	0.355	0.623	0.644	-0.021
	WM2	0.280	0.685	0.701	-0.016
	WM3	0.443	0.535	0.544	-0.009
	WM4	0.414	0.599	0.605	-0.006

DISCUSSION

With the ongoing reform of the healthcare system in Indonesia, the medical services sector is undergoing a significant transformation towards market liberalization. This situation has led to intense competition among hospitals. In this context, public and private hospitals must pursue sustainable development through SERVQUAL improvement to meet patient expectations and win patient trust. Success in creating satisfying services is believed to encourage patient loyalty through repeat visits and positive WOM recommendations to others, relatives, and family members.

SERVQUAL: Effects on Perceived Value and Patient Satisfaction

This study statistically supported H1: hospital SERVQUAL has a positive and significant effect on perceived value. The results of this study align with prior studies (Boakye et al., 2017; Bon, 2019). Different dimensions of SERVQUAL, such as reliability, clarity, responsiveness, and empathy, are significant antecedents of perceived value (Fattahi et al., 2022). These dimensions shape how patients sense the value of the kindnesses they receive during their hospital stay. Factors such as acceptability, affordability, and accessibility also play a crucial role in determining perceived value (Sanıl & Eminer, 2021).

Perceived value theory emphasizes that individuals evaluate a service by comparing the benefits obtained and the sacrifices made (Sweeney & Soutar, 2001). In the hospital context, this study explains aspects of SERVQUAL, such as emotion, function, physical environment quality, trust, and social influence as important dimensions and indicators that shape patients' perceptions of the value of the services they receive. Improvements in SERVQUAL by hospitals strengthen utilitarian value perceptions and enhance the emotional value perceived by patients, such as feelings of safety, comfort, and trust in the healthcare institution (Chaulagain, 2024).

Furthermore, this study also statistically supported H2: hospital SERVQUAL positively and significantly affects patient satisfaction. This study's results align with prior studies that prove that SERVQUAL, consisting of the dimensions of reliability, responsiveness, and empathy, has a strong relationship with patient satisfaction (Rahim et al., 2021). This study explains that hospital SERVQUAL, measured by emotion, function, physical environment quality, trust, and social influence, has been proven to increase patient satisfaction. Furthermore, the SERVQUAL framework identifies key dimensions including "tangibility, reliability, responsiveness, assurance, and empathy" (Álvarez-García et al., 2019; Rahim et al., 2021). Among these dimensions, reliability, responsiveness, and empathy were seen to have an important relationship with patient dissatisfaction (Rahim et al., 2021).

The influence of SERVQUAL on patient satisfaction can be explained through the expectation-disconfirmation theory (Bhattacherjee & Premkumar, 2004), which states that satisfaction arises when the service received exceeds or meets customer expectations. In hospitals, high SERVQUAL is likely to meet or even exceed patient expectations, resulting in higher satisfaction levels (Ferreira et al., 2023). This satisfaction is important because it reflects the hospital's success in meeting patient needs and contributes to patient loyalty and the institution's overall image.

SERVQUAL is a key factor in shaping the value perceived by patients in healthcare settings. By improving various dimensions of SERVQUAL, healthcare providers can enhance perceived value, increasing patient satisfaction and loyalty. This relationship highlights the importance of continuous SERVQUAL improvement in healthcare to meet patient expectations and build long-term relationships with patients.

Perceived Value: Effects on Patient Satisfaction, WOM, and Revisit Intention

This analysis statistically supported the third hypothesis (H3), which states that perceived value positively and significantly affects patient satisfaction. This result agrees with prior studies indicating that perceptions of

healthcare service value can drive increased levels of patient satisfaction (Christanto et al., 2024; Pasinringi et al., 2024). Based on the perceived value theory (Sweeney & Soutar, 2001), perceived value is formed from patients' evaluations of the benefits obtained compared to the sacrifices made. In this study, when patients perceive hospital services as highly valued, in terms of emotional, functional, and physical environment quality, trust, and social influence, satisfaction tends to increase. This satisfaction reflects positive affective responses resulting from fulfilling expectations regarding the services received. Therefore, perceived value is not only a direct determinant of patient satisfaction but also recreates a significant mediating role in bridging SERVQUAL and the outcome of the patient experience.

Furthermore, the research results support the sixth hypothesis (H6): perceived value positively and significantly affects WOM. This finding aligns with the studies by Fattahi et al. (2022) and Ariffin et al. (2022), emphasizing that high perceived value encourages patients to share positive experiences. Based on social exchange theory (Ren & Ma, 2021), individuals tend to recommend services to others if they feel they have significantly benefited from the interaction. In this context, patients who perceive high value from hospital services are more likely to recommend the hospital directly and through digital media. The WOM generated from these high-value experiences has excellent potential to strengthen the hospital's reputation and serve as a credible and influential promotional medium for public perception.

Furthermore, this study also statistically accepted the fourth hypothesis (H4): perceived value positively and significantly affects revisit intention. This finding is supported by previous studies (Andjarwati & Budiarti, 2024; Özer et al., 2017), which show that perceived value directly affects patient loyalty and willingness to revisit. The Theory of Planned Behavior (Ajzen, 1991) provides a theoretical framework that cognitive evaluations of expected outcomes influence the intention to behave, including revisiting a hospital. When patients assess that hospital services provide high overall value, they tend to form long-term preferences that encourage revisiting behavior. Thus, perceived value reflects evaluations of current experiences and serves as an important indicator in shaping loyalty and the sustainability of the relationship between patients and healthcare institutions.

Patient Satisfaction: Effect on WOM and Revisit Intention

This study statistically supported the third hypothesis (H5), which states that patient satisfaction directly affects WOM. This finding is confirmed by previous studies, which indicate that patient satisfaction often mediates SERVQUAL and WOM. For instance, satisfaction mediates the relationship between SERVQUAL dimensions (e.g., technical, interpersonal, and administrative quality) and WOM (Abu-Hasheesh et al., 2024; Coutinho et al., 2020). The influence of patient satisfaction on word of mouth can be explained through the consumer behavior theory and cognitive dissonance theory (Majeed et al., 2024). According to this theory, satisfied patients with a service tend to express their satisfaction through positive communication behaviors, including recommending the service to others. In addition, high patient satisfaction with SERVQUAL results can encourage the formation of positive perceptions, which are then manifested in the form of WOM. WOM is an important means for patients to share their experiences, which not only strengthens the credibility of the hospital institution but also serves as a highly influential information dissemination mechanism for the decision-making of other prospective patients.

This study statistically supported the third hypothesis (H7): patient satisfaction has a direct positive and significant effect on revisit intention. The results of this study support the studies by Kim and Kim (2023) dan Rajić et al. (2021). The influence of satisfaction on revisit intention can be examined through theoretical frameworks such as the customer loyalty model. In this theory, satisfaction is positioned as the main predictor of long-term behavioral intentions, including in the context of healthcare services. Patients who are satisfied with their care experience tend to form emotional and cognitive attachments to the hospital, which ultimately increases the likelihood of returning to use the hospital's services. Therefore, satisfaction serves as an indicator of current service success and a crucial foundation for building patient loyalty and sustaining long-term relationships between hospitals and patients.

Implications

The empirical importance of the results regarding the effect of SERVQUAL on patients' perceived value and satisfaction indicates that hospital leadership ought to pay serious attention to improving the dimensions of service that directly impact patient experience. It includes enhancing the competence of medical staff, implementing responsive and empathetic service standards, and providing comfortable physical facilities that support the healing process. By focusing on these elements, hospitals can improve patients' perceived value and foster sustained satisfaction. This strategy is crucial in facing competition in the healthcare market, especially in attracting and retaining patients amid the ongoing dynamics of healthcare system reforms.

Besides, practical implications include the importance of hospitals in managing the overall patient experience to encourage positive behaviors such as WOM recommendations and the intention to revisit. Hospitals need to design effective feedback systems to monitor patient satisfaction levels and identify areas of service that require continuous improvement. Furthermore, strengthening patient relationships through post-service communication, health education, and loyalty programs can be practical strategies for maintaining long-term

patient engagement. By strategically understanding and managing value perceptions and satisfaction, hospitals can build sustainable competitive advantages and enhance their institutional image in the public eye.

CONCLUSION

The outcomes indicate that all hypotheses proposed are statistically supported. SERVQUAL in hospitals has a positive and significant impact on perceived value and satisfaction. Furthermore, perceived value influences satisfaction, revisit intention, and WOM. On the other hand, satisfaction also significantly affects revisit intention and word of mouth. One limitation of this study is the use of a cross-sectional design, which limits the exploration of long-term causal relationships between variables. Therefore, the forthcoming study could embrace a longitudinal approach to examine the dynamics of relationships between variables over time, particularly in assessing long-term patient loyalty. Additionally, comparative studies between private and government hospitals could provide broader insights into the contextual influences on patient perceptions and behavior. Developing models incorporating moderating variables such as trust, patient engagement, or digital experience could also enrich our knowledge of the factors influencing patient loyalty in the era of digital healthcare transformation.

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