

The Impact Of Perceived Service Quality And Trust On Behavioral Intention Of Cancer Patients Through Satisfaction

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Abstract

This research explores the intricate relationship between perceived service quality, trust, and the behavioral intentions of cancer patients, with a focus on the mediating role of satisfaction. Conducted in Liuzhou, Guangxi, the study hinges on the analysis of 302 valid questionnaires through Structural Equation Modeling (SEM). The findings indicate that both perceived service quality and trust significantly influence cancer patients' behavioral intentions towards healthcare services. Crucially, satisfaction emerges as a pivotal intermediary, linking perceived service quality and trust with behavioral intentions. This underscores the critical role of satisfaction in shaping patients' willingness to engage with and recommend healthcare services. The implications of this study are manifold. For healthcare providers, particularly in oncology, enhancing service quality and building trust are fundamental strategies to improve patient satisfaction and, consequently, behavioral intentions. This research not only adds to the theoretical discourse on healthcare service quality but also offers practical insights for hospitals aiming to foster patient loyalty and positive word-of-mouth, which are vital in the competitive healthcare landscape. By prioritizing patient satisfaction through improved service quality and trust, healthcare institutions can better meet the needs of cancer patients, leading to enhanced treatment adherence and overall health outcomes. This study contributes to a deeper understanding of the dynamics between service quality, trust, satisfaction, and patient behavioral intentions, offering a valuable framework for healthcare management and policy formulation in the context of cancer care.

Keywords: *perceived service quality, trust, satisfaction, behavioral intention.*

Introduction

Cancer is a serious chronic disease that imposes a significant physical, psychological and financial burden on patients and families. In China, the number of cancer patients is increasing year by year, and it has become one of the major public health problems that seriously threatens the health of the Chinese population. According to the latest data released by the International Agency for Research on Cancer (IARC) of the World Health Organization in 2020, there are 4.57 million new cancer cases and 2.81 million deaths in China, and cancer deaths account for 23.91% of the total causes of death in the population (He, 2022). Guangxi is a region with high incidence of tumor. There were 52,345 new cancer patients and 34,162 deaths in Guangxi in 2020, with both incidence and mortality higher than the national average (China National Cancer Center, 2021). The number of new cancer cases, deaths and treatment costs in China and Guangxi from 2016 to 2020 are shown in Table 1.

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Table 1 Number of New Cases, Deaths, and Treatment Costs for Tumor Patients (China and Guangxi, 2016–2020)

Year	China			Guangxi		
	New cases (Unit: 10,000)	Deaths (Unit: 10,000)	Treatment Costs (Unit: billion yuan)	New cases (Unit: 10,000)	Deaths (Unit: 10,000)	Treatment Costs (Unit: billion yuan)
2016	408.5	282.4	9532	4.0854	2.7856	8.73
2017	417.5	281.1	11280	4.3826	2.9506	94.27
2018	427.5	282.1	12717	4.6487	3.0567	109.49
2019	437.5	283.1	13954	4.9354	3.2482	124.61
2020	434.4	281.1	14956	5.2345	3.4162	139.07

Source: China Tumor Registry Annual Report 2016–2020

Behavioral intention refers to the tendency of patients to choose the healthcare service of the organization again and to recommend the healthcare organization to others after receiving healthcare service. Patient behavioral intentions can predict the maintenance status of the service relationship between patients and healthcare providers, increase the economic and social benefits of healthcare providers, and improve patient participation and adherence to healthcare services, thereby promoting improved patient health outcomes.

The medical behavior of cancer patients has a positive impact on the sustainable development of hospitals (Zhang & J., 2018). Patients with positive behavioral intentions are more likely to be treated in the same hospital, maintaining a stable patient population, reducing patient turnover, and improving the competitiveness of the hospital. In addition, patients with positive behavioral intention are more willing to establish a long-term relationship with the hospital, which usually spreads through word-of-mouth and attracts more patients to the hospital and promotes the business growth of the hospital (Zou & Wang, 2018). Therefore, improving patient behavioral intention is one of the key factors for the long-term stable development of hospitals.

For cancer patients, receiving high-quality medical services is crucial for their survival and quality of life. As a less developed city in China, Liuzhou has relatively limited medical resources and service levels. In the cancer patient population, their perceptions, trust, and satisfaction with healthcare services may be affected by a variety of factors, such as the lack of healthcare resources, ethnic medication habits, the complexity of the doctor-patient relationship, and the cultural literacy of the patients and their families (Li & Ji, 2022). In the current study, although some attention has been paid regarding the impact of patient satisfaction on patients' behavioral intentions, the findings are not yet consistent and there are certain research gaps. In particular, the effect of patient satisfaction on patients' behavioral intention may vary among patients in different regions, different types of medical institutions, or different disease types (Huang & Cao, 2021).

Therefore, further in-depth research on the effects of perceived service quality, trust, and patient satisfaction on cancer patients' behavioral intention is of great theoretical and practical significance to gain insight into the mechanisms of behavioral decision-making among cancer patients, improve healthcare service quality, and optimize healthcare management and decision-making.

Literature Review

Perceived Service Quality and Patient Satisfaction

The theory of perceived service quality suggests that customers form subjective perceptions and evaluations of the service provider's performance, which are considered as service quality. If customers perceive high service quality, they are generally satisfied with the

service provider and willing to continue using the service. Conversely, if customers perceive low service quality, they may express dissatisfaction and look for other service providers (Li, C., Zhou, H., Wan, J., & Wang, F., 2021).

Zhai et al. (2019) found that the biggest factor affecting patient satisfaction was patient cognitive perception, followed by personnel quality perception, process quality perception, technology quality perception and cost perception. Agbi (2020) found in their study of patient satisfaction in Ghana's healthcare sector that patients' perception of service quality has a significant positive impact on their satisfaction, with reliability, responsiveness, and empathy having the greatest impact on satisfaction. Zhao et al. (2020) found in their study that medical technology and medical ethics are the main factors affecting overall patient satisfaction in prefecture-level hospitals. Additionally, Kant and Jaiswal (2017) found in their study of the Indian banking sector that the "responsiveness" dimension of perceived service quality was the most important predictor of customer satisfaction.

Based on the content of the above literature research, this research proposes the following hypothesis:

H1: Perceived service quality affects patient satisfaction.

Perceived Service Quality and Behavioral Intention

In recent years, an increasing number of studies have focused on the relationship between perceived service quality and behavioral intentions. Many studies have found that perceived service quality has a significant positive effect on behavioral intentions. Wu et al. (2022) found that doctors' service reputation, service qualifications, technical quality, and comment quality affect patients' online doctor selection behavior. Cao et al. (2022) found that interaction frequency, response speed, information quantity, e-word-of-mouth, outpatient registration, and price have a positive impact on online patient purchase behavior. Through the use of a structural equation model, Aliman and Mohamad (2016) investigated the correlation between perceived service quality, patient satisfaction, and behavioral intentions in the Malaysian private healthcare industry. The study revealed a positive correlation between service quality dimension and patient satisfaction. The dimensions of service quality, patient satisfaction and behavioral intention were positively correlated. Singh and Dixit (2021) found that the infrastructure, personnel quality, and social responsibility dimensions of PSQ have a direct impact on behavioral intention in their study of Indian government hospitals.

Based on the content of the above literature research, this research proposes the following hypothesis:

H2: Perceived service quality affects behavioral intention.

Trust and Patient Satisfaction

Trust theory holds that trust is a person's expectation and willingness to act in a manner consistent with their expectations of another person or organization at a critical moment (Xu, 2020). In health care, if patients trust their doctors, they are more likely to be satisfied with the health care provided by their doctors and are more willing to continue with the same doctor. Conversely, if patients do not trust their doctors, they may become dissatisfied with health care services and may seek services from other health care providers (Dhir et al., 2019).

Chen et al. (2020) conducted a survey on 180 Chinese patients treated in hospitals and found that patients' trust in doctors and medical institutions was positively correlated with patient satisfaction, that is, the higher the trust level, the higher the patient satisfaction. Similarly, Alenazi et al. (2021) study found that patient trust is closely related to healthcare service satisfaction, and patient trust in doctors is closely related to the evaluation of the doctor's attention, nursing attitude, appointment scheduling, and waiting time. Dugan et al. (2005) study also found that patient trust is one of the important factors that affect

satisfaction. Additionally, patient trust can be established through the doctor's professional knowledge and skills, communication skills, and humanized services, among other aspects.

Based on the content of the above literature research, this research proposes the following hypothesis:

H3: Trust affects patient satisfaction.

Trust and Behavioral Intention

As an important factor influencing patients' behavioral intentions, the level of trust patients have in their healthcare providers is closely related to their behavioral intentions toward healthcare. A study by Dhagarra et al. (2020) using structural equation modeling on healthcare recipients from New Delhi, India, showed that trust and privacy concerns were direct predictors of patients' technology acceptance behavior when utilizing healthcare services. This study provides an empirical contribution regarding the impact of trust and privacy concerns on healthcare technology acceptance. The results of Shen et al. (2020) also showed that patient trust has a significant positive impact on the first visit willingness of patients in the community. A study by Zhao et al. (2021) similarly demonstrated that patients' interpersonal trust in primary care providers influenced willingness to make a first visit.

Based on the content of the above literature research, this research proposes the following hypothesis:

H4: Trust affects behavioral intention.

Patient Satisfaction and Behavioral Intention

Individuals' satisfaction and behavioral intention are influenced by their attitudes, subjective norms, and perceived behavioral control (Lei, 2019). Patient satisfaction directly affects patients' behavioral intention to seek medical treatment, and patients are more likely to continue to choose the medical service they are satisfied with. This leads to more positive behavioral intentions during the course of receiving medical care (Wang & Li, 2022).

In recent years, the impact of patient satisfaction on patients' behavioral intentions has become a hot topic in healthcare service quality research. Studies have shown that patient satisfaction has an important influence on patients' behavioral intentions. On the one hand, patient satisfaction is positively correlated with behavioral intention. By utilizing PLS-SEM, Widjaja and Achmadi (2022) examined the influence of service quality, patient satisfaction, and COVID-19 protection on patients' behavioral intention. The results of their study revealed a positive and significant impact of patient satisfaction on behavioral intention. Rungklin et al. (2023) found in their study on medical tourists in southern Thailand that patient satisfaction directly influences the decision to reuse foreign medical tourist services and affects the intention to disseminate information through electronic media. However, some studies have shown that patient satisfaction has no positive impact on behavioral intention and further research is needed to examine the mediating role of patient satisfaction in the mechanism of its impact on behavioral intention (Karsana & Murhadi, 2021).

Based on the content of the above literature research, this research proposes the following hypothesis:

H5: Patient satisfaction affects behavioral intention.

Satisfaction, Perceived Service Quality, and Behavioral Intention

In recent years, researchers have conducted extensive research on the mediating effects of patient satisfaction on perceived service quality and behavioral intentions. The study by Akthar et al. (2023) showed that the perception of service quality significantly affects patient behavioral intentions through the mediating effect of patient satisfaction. Healthcare professionals must ensure the provision of good service quality to improve patient satisfaction with the service, which will affect patient behavioral intentions. Guspianto et al. (2022) found in their study on the revisit intentions of patients to public health centers that service quality significantly affects patient satisfaction, which in turn significantly

affects patients' revisit intentions. Similarly, In another study by Aladwan et al. (2021), service quality was found to have a positive direct effect on patient behavioral intentions and patient satisfaction, with patient satisfaction acting as a mediator between service quality and patient behavioral intentions. Similarly, Suhail and Srinivasulu (2021) conducted a survey of 178 patients from 35 healthcare facilities in the Ashanti region of Ghana and observed a significant positive correlation between the perception of service quality and patient satisfaction and behavioral intentions. The study also showed that patient satisfaction acts as a mediator between perceived service quality and healthcare behavioral intentions.

Based on the content of the above literature research, this research proposes the following hypothesis:

H6: Perceived service quality affects behavioral intention through patient satisfaction.

Satisfaction, Trust, and Behavioral Intention

Numerous studies have investigated the mediating role of patient satisfaction in the relationship between trust and behavioral intention. Huang and Zhang (2014) found that patient satisfaction mediates the association between trust and loyalty behavior, regardless of whether the trusted party is a physician or a hospital. Fachmi et al. (2020) conducted a survey on the life insurance industry and found that service quality, trust and corporate image have a direct and significant positive impact on customer satisfaction. The mediating effect of customer satisfaction shows that service quality, trust and corporate image have significant indirect positive influence on customers' website transaction intention. Chang et al. (2019) investigated the doctor-patient online interaction and reported that distributive justice, procedural justice, and interpersonal justice significantly affect patient trust, which then affects satisfaction and willingness to continue consulting. The intention to consult significantly affects patients' behavioral intention to visit.

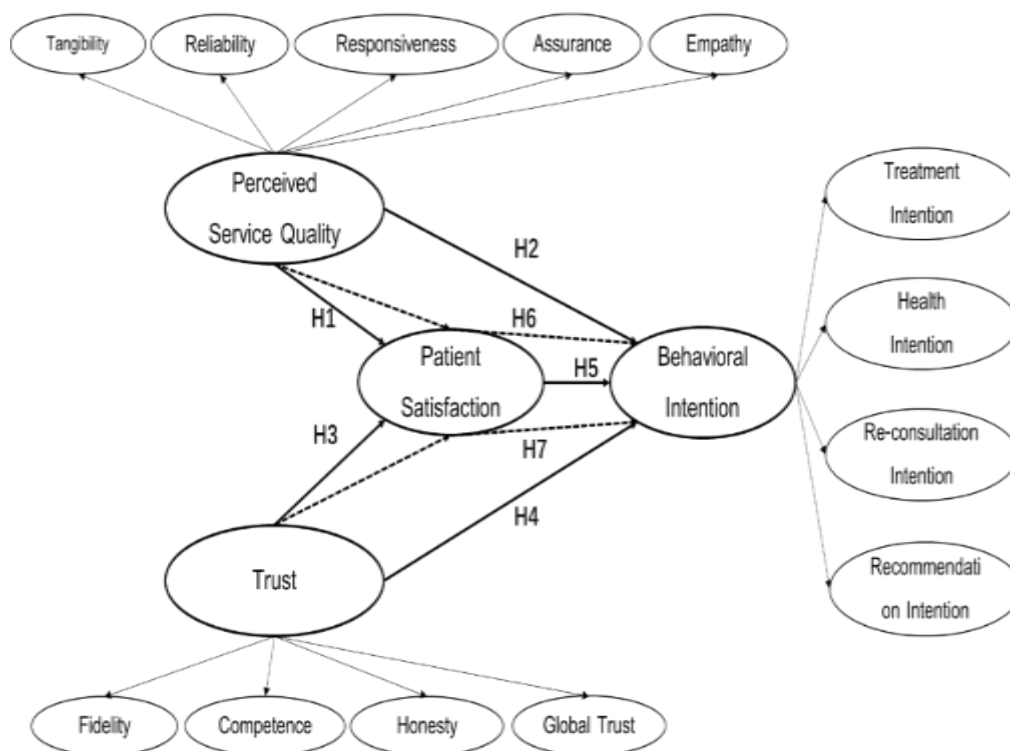
Based on the content of the above literature research, this research proposes the following hypothesis:

H7: Trust affects behavioral intention through patient satisfaction.

Research Framework

The purpose of this study was to investigate the relationship between perceived service quality, trust, patient satisfaction and behavioral intention. Based on the above literature review and assumptions, the conceptual model constructed in this study is shown in Figure 1.

Figure 1 Conceptual Framework



Method

Participants

This is a study on the behavioral intention of cancer patients in Liuzhou, Guangxi. We distribute questionnaires through an online survey platform to collect data on perceived service quality, trust, satisfaction and behavioral intention. Taking into account the particularity of cancer patients, this study adopted a stage sampling approach, and the use of an online survey platform is ideal for collecting comprehensive and representative data on cancer patients.

In order to ensure the statistical significance and accuracy of the research results, we determined that the minimum sample size was 166 according to the calculation formula of the number of variables and sample size. In fact, in order to ensure the validity of the questionnaire data, the minimum sample size should be greater than 25. Through the online survey platform, we finally collected 308 responses to the questionnaire. After excluding 6 invalid questionnaires, 302 valid questionnaires remained, with a valid questionnaire rate of 98.1%. This ratio indicates that the target population has a strong interest and willingness to participate in the study.

The subjects of this study were patients with pathologically or cytologically confirmed cancer (regardless of cancer type), who had been hospitalized for at least seven days, were conscious, and had no history of other major physical or mental illness. The questionnaire was filled out by the patient. For patients who were unable to write, their accompanying family members filled out the questionnaire on their behalf. The 302 valid survey samples collected covered a variety of occupations, educational backgrounds, income levels and ethnic characteristics.

Table 2 reveals a nuanced portrait of the surveyed population, with females slightly outnumbering males at 51.99% to 48.01%. The Dong ethnicity emerges as the most represented at 2.20%, reflecting its significant presence. The majority of participants fall into the 30 to 39 age bracket, accounting for 42.38%, indicating a young and active workforce. Education levels are high, with 44.37% having completed high school or junior high school and 41.06% holding a college or undergraduate degree, showcasing a well-educated demographic. Enterprise employees form the largest occupational group at

27.82%, highlighting the sector's importance. The salary range of 2000–3999 RMB per month is the most common, encompassing 5.00% of respondents and suggesting a middle-income bracket. Regarding healthcare financing, urban employee insurance is the preferred method for 34.44%, indicating a significant dependence on this insurance scheme among urban workers.

Table 2 Participant Profile

Characteristics	f	%
Gender		
Male	145	48.01
Female	157	51.99
Ethnicity		
Han	43	14.24
Zhuang	49	16.21
Miao	45	14.90
Yao	50	16.56
Dong	61	2.20
Others	54	17.88
Age		
< 30	97	32.12
30–39	128	42.38
40–49	46	15.23
50–59	31	1.27
Education		
Lower than High School	13	4.30
High School/Junior High School	134	44.37
College/Undergraduate	124	41.06
Graduate or higher	31	1.27
Occupation		
Government	51	16.88
Enterprise Employee	84	27.82
Student	68	22.52
Farmer	45	14.90
Others	54	17.88
Salary (RMB/Month)		
Below 2000	32	1.60
2000–3999	151	5.00
4000–5999	80	26.49
6000 or above	39	12.91
Payment method		
Rural cooperative insurance	25	8.27
Urban employee insurance	104	34.44
Urban resident insurance	87	28.81
Commercial insurance	63	2.86
Self-payment	23	7.62

Instruments

The main objective of this study was to identify the factors that influence the behavioral intentions of cancer patients, and as such, the study was exploratory in nature and intended to be descriptive and analytical. The scale measurement constructed in this study mainly draws on the existing scales, which have been proved to be reliable and effective. The five-point Likert scale was used to measure perceived service quality, trust, patient satisfaction

and behavioral intention. All items were measured using a five-point Likert scale, with 1 indicating strong disagreement and 5 indicating strong agreement. On the basis of literature review, the measurement of research variables is shown in Figure 2.

Data Collection

In this study, an online questionnaire survey was used to collect data. This approach is not only convenient for participants. The questionnaire can be completed by computer or mobile device, and respondents can participate anytime and anywhere, thus improving the convenience and response rate of the survey. Before the implementation of the questionnaire, a small-scale pre-test was conducted to ensure the effectiveness and appropriateness of the questionnaire.

During the research process, great attention is paid to ethical issues, ensuring the voluntary participation of all participants with full informed consent. To this end, the research team has established a complete ethical process and obtained ethical approval from the Institutional Review Board (IRB), ensuring the protection of ethical standards and participants' rights. For the mental health related data collected, the research team implemented strict privacy protection and data security measures to ensure the safe storage and processing of information.

At the same time, considering the potential impact of the survey on the participants' mental health, the research team provided corresponding mental health support resources or suggestions, reflecting the care for the participants' health. These comprehensive ethical measures not only protect the rights of the participants, but also strengthen the rigor of the research and the validity of the results.

Data Analysis

This study used quantitative research methods to explore the relationship between perceived service quality, trust, satisfaction and behavioral intention of cancer patients, with special emphasis on the mediating role of satisfaction. A series of advanced statistical techniques are used to rigorously test the hypothetical model. In order to accurately evaluate the analysis results, SmartPLS 4.0 was used to analyze the structural equation modeling (SEM) data. The aim of this study was to systematically examine the effects of perceived service quality, trust and satisfaction on behavioral intention of cancer patients, and how satisfaction acts as a mediating variable.

In the early stage of the study, the validity of each variable scale was analyzed to ensure the reliability of the scale and the rationality of the project design. Then, the structural equation model is tested to fit, and the whole structural equation model diagram is built on this basis. The researchers then analyzed the direct effects of perceived service quality, trust, and satisfaction on behavioral intention. Finally, this study focuses on the mediating role of satisfaction between perceived service quality and behavioral intention, trust and behavioral intention.

Results

By building a structural equation model, using SmartPLS 4.0 software to fit the model, and using Bootstrap method to analyze the mediation effect, it is found that perceived service quality, trust and satisfaction have significant positive effects on the behavioral intention of cancer patients. In addition, perceived service quality and trust also have significant positive effects on satisfaction. According to the mediation effect analysis, satisfaction degree plays a partial mediating role between perceived service quality and behavioral intention, trust and behavioral intention of cancer patients.

Measurement Model Evaluation

In research or statistics, internal consistency reliability is a measure of the results of a test or an actual and measured outcome. It reveals the degree of measurement error impact, testing the stability, consistency, trustworthiness, and reliability of the test results, and ensuring that the measurements in this study are not influenced by other external conditions

that could affect the test results.

Currently, there are two methods employed for assessing internal consistency reliability: Cronbach's Alpha coefficient (CA) and Construct reliability (CR). In this study, Cronbach's α coefficient was utilized as a pre-test measure of questionnaire reliability to evaluate the consistency and accuracy of the instrument. The α coefficient ranges from 0 to 1, with values above .7 indicating high reliability and values exceeding .9 signifying excellent reliability. The composite reliability value encompasses the reliabilities of all measurement variables, representing the internal consistency of the dimensional index. A higher value indicates greater internal consistency within the model's reference target, with a threshold of acceptability set at .7 (Hair,1997), while a recommended value above .6 is suggested by Fornell & Larcker (1981).

Another method for determining convergent validity in this study is Average Variance Extracted (AVE), which represents the proportion of the latent variable that can be measured by the observed variable. It can be used to judge reliability and represent discriminate validity. It is defined as the total squared factor loadings of all the pointers in a construct divided by the total squared factor loadings plus the sum of the error variances, used to measure the commonality of the constructs. If the value of the mean variance extraction is equal to or greater than .50, it means that the potential construct explains more than half of the variance of the indicators. Conversely, if the value of the mean variance extraction is less than .50, it implies that the error component in the variances is greater than the proportion of variances explained by the constructs (Hair et al., 2013). Therefore, the mean variance extraction uses .5 as a critical criterion, and when the value is greater than .5, it indicates that the composite validity is good. First-order reliability and validity are shown in Table 4, and first-order reliability and validity are shown in Table 5.

Table 4 First-Order Reliability and Validity Analysis

Path	λ	t	p	α	CR	AVE
PSQ1 <- A1-Tan	.912	97.006	< .001	.886	.929	.814
PSQ2 <- A1-Tan	.888	68.280	< .001			
PSQ3 <- A1-Tan	.907	77.998	< .001			
PSQ4 <- A2-Rel	.852	44.506	< .001	.834	.900	.750
PSQ5 <- A2-Rel	.876	53.587	< .001			
PSQ6 <- A2-Rel	.871	45.769	< .001			
PSQ7 <- A3-Resp	.851	44.651	< .001	.833	.899	.748
PSQ8 <- A3-Resp	.872	48.733	< .001			
PSQ9 <- A3-Resp	.872	58.350	< .001			
PSQ10 <- A4-Assur	.865	55.551	< .001	.873	.913	.724
PSQ11 <- A4-Assur	.853	53.814	< .001			
PSQ12 <- A4-Assur	.826	42.036	< .001			
PSQ13 <- A4-Assur	.859	56.171	< .001			
PSQ14 <- A5-Emp	.928	94.152	< .001	.828	.921	.853
PSQ15 <- A5-Emp	.919	71.308	< .001			
TRUST 16 <- B1-Fid	.923	9.208	< .001	.842	.926	.863
TRUST 17 <- B1-Fid	.935	113.011	< .001			
TRUST 18 <- B2-Comp.	.895	74.110	< .001	.840	.904	.758
TRUST 19 <- B2-Comp.	.861	6.009	< .001			
TRUST 20 <- B2-Comp.	.854	49.113	< .001			
TRUST 21 <- B3-Hon	.851	42.717	< .001	.804	.885	.719
TRUST 22 <- B3-Hon	.832	42.038	< .001			
TRUST 23 <- B3-Hon	.861	5.705	< .001			

TRUST 24 <- B4-GT	.927	74.793	< .001	.773	.897	.813
TRUST 25 <- B4-GT	.875	43.235	< .001			
PS26 <- C-PS	.872	72.197	< .001	.888	.923	.749
PS27 <- C-PS	.879	7.795	< .001			
PS28 <- C-PS	.873	62.542	< .001			
PS29 <- C-PS	.837	52.109	< .001			
BI30 <- D1-RPI	.911	73.677	< .001	.757	.891	.804
BI31 <- D1-RPI	.883	53.525	< .001			
BI32 <- D2-RDI	.910	74.103	< .001	.774	.898	.815
BI33 <- D2-RDI	.896	55.231	< .001			
BI34 <- D3-TI	.881	63.925	< .001	.808	.886	.722
BI35 <- D3-TI	.837	45.080	< .001			
BI36 <- D3-TI	.831	43.230	< .001			
BI37 <- D4-HI	.877	61.158	< .001	.846	.907	.764
BI38 <- D4-HI	.863	46.676	< .001			
BI39 <- D4-HI	.882	75.867	< .001			

Table 5 Second-Order Reliability and Validity Analysis

Path	λ	t	p	α	CR	AVE
A1-Tan <- A-PSQ	.835	47.588	< .001	.877	.910	.670
A2-Rel <- A-PSQ	.834	47.533	< .001			
A3-Resp <- A-PSQ	.798	36.306	< .001			
A4-Assur <- A-PSQ	.830	44.548	< .001			
A5-Emp <- A-PSQ	.794	34.563	< .001			
B1-Fid <- B-TRUST	.837	48.014	< .001	.827	.885	.659
B2-Comp <- B-TRUST	.857	57.692	< .001			
B3-Hon <- B-TRUST	.773	28.166	< .001			
B4-GT <- B-TRUST	.777	32.041	< .001			
PS26 <- C-PS	.872	72.351	< .001	.888	.923	.749
PS27 <- C-PS	.879	71.662	< .001			
PS28 <- C-PS	.874	63.668	< .001			
PS29 <- C-PS	.836	51.856	< .001			
D1-RPI <- D-BI	.849	49.874	< .001	.847	.897	.685
D2-RDI <- D-BI	.832	51.124	< .001			
D3-TI <- D-BI	.833	49.667	< .001			
D4-HI <- D-BI	.796	32.367	< .001			

Discriminant Validity

Validity analysis is to verify whether the correlation between two different dimensions is statistically different. Items in different isomorphic surfaces should not be highly correlated. If they are (above .85), it means that these items measure the same thing, which usually occurs when there is excessive overlap in the definition of the dimensions. In this study, a more rigorous AVE method was used to evaluate the Discriminant Validity. Fornell & Larcker, 1981 The AVE square root of each factor must be greater than the correlation coefficient of each pair of variables, indicating that there is Discriminant Validity among factors. The diagonal is that the AVE square root of each factor is greater than the standardized correlation coefficient outside the diagonal, so this study has differential validity, and the lower oblique triangle is the correlation coefficient. The first-order Fornell & Larcker discriminant validity is shown in Table 6, and the second-order Fornell &

Larcker discriminant validity is shown in Table 7.

Table 6 First-Order Fornell & Larcker Discriminant Validity

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. A1	.902													
2. A2	.623	.866												
3. A3	.575	.598	.865											
4. A4	.615	.614	.585	.851										
5. A5	.597	.569	.521	.572	.924									
6. B1	.356	.207	.267	.319	.214	.929								
7. B2	.330	.252	.316	.339	.288	.646	.871							
8. B3	.273	.226	.225	.293	.233	.514	.556	.848						
9. B4	.243	.184	.179	.215	.159	.539	.553	.456	.901					
10. C-PS.490	.469	.445	.545	.464	.540	.566	.481	.444	.865					
11. D1	.415	.412	.361	.404	.369	.333	.397	.325	.323	.561	.897			
12. D2	.373	.425	.331	.376	.349	.263	.345	.326	.250	.471	.613	.903		
13. D3	.377	.361	.346	.344	.349	.395	.391	.374	.279	.578	.633	.584	.850	
14. D4	.416	.446	.361	.415	.399	.313	.408	.399	.268	.575	.553	.561	.533	.874

Table 7 Second-Order Fornell & Larcker Discriminant Validity

	1	2	3	4
1. A-PSQ	.818			
2. B-TRUST	.388	.812		
3. C-PS	.590	.628	.865	
4. D-BI	.563	.503	.660	.828

Then we use the hetero-elemental ratio, that is, the ratio of the between-trait correlation to the within-trait correlation. It is the ratio of the mean of the index correlation between different isomorphic surfaces to the mean of the index correlation between different isomorphic surfaces. The results are shown in the table below. It can be seen from the following table that the HTMT value between each of the two variables in this study is lower than .85, indicating that each variable has a good Discriminant Validity. As shown in Table 8 and Table 9.

Table 8 First-Order HTMT Discriminant Validity

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. A1														
2. A2	.723													
3. A3	.670	.720												
4. A4	.699	.720	.686											
5. A5	.696	.681	.628	.673										
6. B1	.414	.245	.312	.372	.254									
7. B2	.383	.301	.374	.395	.344	.768								
8. B3	.324	.279	.275	.350	.284	.625	.677							
9. B4	.293	.220	.217	.263	.196	.662	.685	.577						
10. C-PS	.550	.542	.513	.619	.540	.623	.654	.567	.529					

11. D1	.507	.515	.451	.494	.465	.413	.495	.417	.416	.679
12. D2	.450	.526	.413	.457	.435	.324	.427	.413	.323	.566 .804
13. D3	.444	.437	.417	.410	.425	.477	.472	.462	.349	.680 .812 .741
14. D4	.476	.528	.429	.482	.473	.368	.482	.484	.327	.659 .687 .692 .647

Table 9 Second Order HTMT Discriminant Validity

	1	2	3	4
1. A-PSQ				
2. B-TRUST	.453			
3. C-PS	.667	.730		
4. D-BI	.654	.600	.759	

Structural Equation Model Evaluation

The R² interpretation of endogenous latent variables is generally greater than .67, indicating a strong degree of explanation. A range between .33 and .67 indicates a moderate degree of explanation, a range between .19 and .33 indicates a low degree of explanation, and a level below .19 indicates little to no explanation. As shown in Table 10 of the results of this study, the R-square of patient satisfaction and behavioral intention were .535 and .493. These values are all between .33 and .67, indicating a strong degree of explanation.

Q-square indicates that exogenous variables explain predictive correlation to endogenous variables, generally between 0-1, Q-square is greater than 0, and the model has predictive ability. When Q-square is less than 0, it means no prediction; when Q-square is between .02 and .13, it means small prediction; when Q-square is between .13 and .26, it means general prediction; when Q-square is greater than .26, it means strong prediction. The results of this study are shown in Table 11. The Q-square of patient satisfaction and behavioral intention are .394 and .332 respectively, both greater than .26. It shows that the predictive correlation index Q-square of each explained variable of the research model has strong predictive ability.

The collinearity of the model was diagnosed and analyzed. It can be concluded that the VIF between the measured variables and the potential variables are all less than 5, indicating that there is no collinearity in the model. It can be seen from Table 14 that SRMR in this study is .067, which is less than .08, indicating that the model is acceptable.

The magnitude and significance of the path coefficient are utilized to assess the relationship between research hypotheses. When the sample data are standardized, the path coefficient will range between 1 and -1. A value closer to 1 indicates a more positive correlation, while a value closer to -1 indicates a more negative correlation. The t value can be further calculated by dividing the path coefficient by the standard deviation. According to past research, when the study's sample size exceeds 30, the quartile of the normal distribution can be used as the critical value. If the t value is larger than the critical value, it can be stated that there is a significant level of significance under a certain level of error. The critical value is typically 1.96, 2.57, and 3.29 (Hair et al., 2013). In this study, path coefficients and t values were calculated using Bootstrapping. The number of Bootstrap cases was set to 5000 for the calculation of path coefficients and t values. The path coefficients of the structural model in this study are shown in Figure 3, and the results are shown in Table 15.

Figure 3 Structural Equation Model

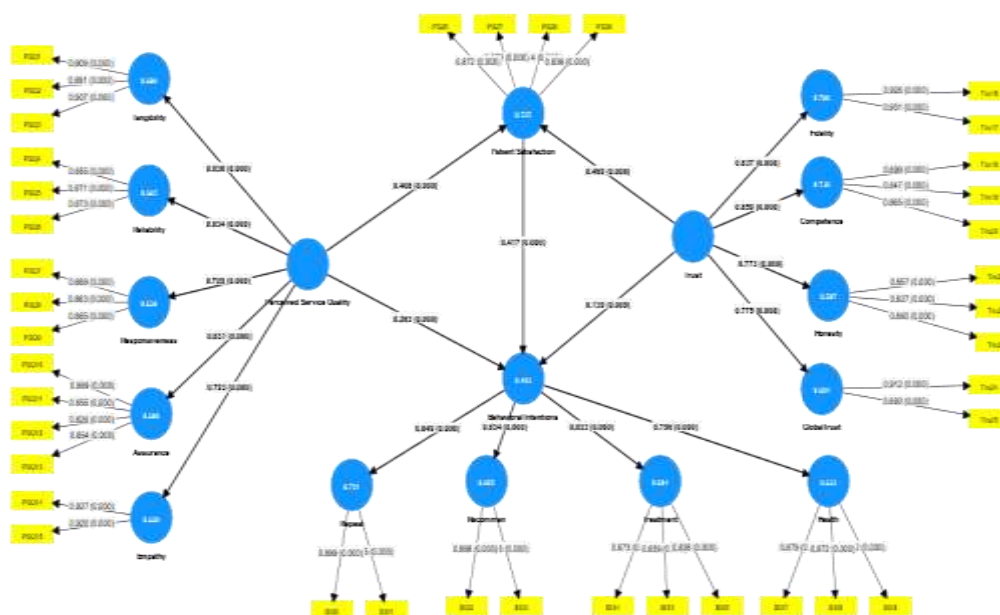


Table 15 Path Coefficients for PLS Structural Equation Modelling

Path	β	M	SD	t	p
A-PSQ -> C-PS	.408	.407	.040	1.144	< .001
A-PSQ -> D-BI	.263	.265	.053	4.956	< .001
B-TRUST -> C-PS	.469	.469	.037	12.537	< .001
B-TRUST -> D-BI	.139	.138	.053	2.620	.009
C-PS -> D-BI	.417	.417	.057	7.323	< .001

Effect size (f^2) serves as an indicator to gauge the magnitude of an independent variable's impact at the conclusion of an experiment. It is particularly valuable for assessing the influence of removing an exogenous variable on the coefficient of determination, thereby determining whether the endogenous variable is significantly affected by the omission of the exogenous variable.

In this study, the Partial Least Squares (PLS) method was employed to compute the effect size. This was achieved by subtracting the initial coefficient of determination, calculated without removing the exogenous variables, from the new coefficient of determination following the elimination of one or more exogenous variables. The result was then divided by one minus the coefficient of determination.

Effect sizes are interpreted based on established research guidelines, where effect values of .35 are considered high, .15 are medium, and .02 are low, following Cohen's recommendations in 1988.

Analysis of Mediating Effect

In this study, in order to prove whether GSE, GM, and GOC play a mediating role in the effect of the independent variable GTL on EGB, Bootstrap mediation effect test was used to test whether the mediation effect was significant or not, with a confidence interval of Bias Corrected (95%), and the number of repeated samples was 5000, and the results of the mediation effect test was carried out, which was shown in Table17.

Table 17 Bootstrap Mediation Effects Test

	M	SD	t	p	2.50%	97.50%
A-PSQ ->	.265	.053	4.956	< .001	.154	.361

C-PS -> D- BI	.170 .435	.030 .045	5.609 9.571	< .001 < .001	.117 .341	.238 .516
B-TRUST -> C-PS -> D-BI	.138 .195 .333	.053 .031 .044	2.620 6.393 7.630	.009 < .001 < .001	.035 .139 .248	.240 .259 .419

As can be seen from the above table, the direct effect of perceived A-PSQ -> C-PS -> D-BI is .263, and the confidence interval of Bias Corrected (95%) [.154, .361], excluding 0, indicates that the direct effect is significant. The indirect effect is .170, and the confidence interval of Bias Corrected (95%) [.117, .238] does not contain 0, indicating that the indirect effect is significant and the mediating proportion is 39.3%, which is a partial mediating effect.

The direct effect of B-TRUST -> C-PS -> D-BI is .139, and the confidence interval of bias corrected (95%) [.035, .240], excluding 0, indicates that the direct effect is significant. The indirect effect is .196, and the confidence interval of bias corrected (95%) [.139, .259] does not contain 0, indicating that the indirect effect is significant and the mediating proportion is 58.5%, which is a partial mediating effect.

Discussion

In this study, the use of a structural equation model revealed significant impacts of perceived service quality, trust, and patient satisfaction on behavioral intention, aligning with findings from previous research by scholars like Agbi (2020) and Zhao et al. (2020). Specifically, perceived service quality influenced patient satisfaction with a coefficient of .408, while trust's impact on satisfaction was even higher at .469. Both factors also directly influenced behavioral intention. Patient satisfaction's effect on behavioral intention was marked significant, affirming all hypotheses.

Further analysis underscored patient satisfaction's crucial mediating role between perceived service quality and behavioral intention, supporting hypothesis H6 and echoing findings from Akthar et al. (2023). This mediating role was similarly observed between trust and behavioral intention, confirming hypothesis H7 and aligning with research by Fachmi et al. (2020). These results collectively validate the study's seven hypotheses, highlighting the profound influence of perceived service quality, trust, and patient satisfaction on behavioral intention.

The study emphasizes the importance of patient behavioral intention for hospital development. Positive behavioral intentions extend beyond repeat visits, including recommendations through word of mouth or social media, thereby attracting more potential patients. Recognizing and fostering these intentions can lead hospitals to enhance quality management, innovate service systems, and formulate strategies that boost service quality, patient trust, loyalty, and referrals—key for hospital growth and innovation.

Optimizing diagnosis and treatment procedures by simplifying patient processes from registration to medication collection reduces wait times and enhances treatment efficiency. Concurrently, investing in medical technology and staff training ensures high-quality, effective patient care. Clear communication between healthcare providers and patients regarding treatment plans boosts patient confidence and trust.

Improvements in the physical environment of healthcare facilities and the creation of a supportive, caring atmosphere address both tangible and psychological patient needs, impacting satisfaction and recovery. Demonstrating the hospital's professional strengths and maintaining transparency in treatment plans and potential risks builds patient trust. Protecting patient privacy and focusing on personalized patient experiences, including follow-up care, are essential for a positive healthcare experience.

Support mechanisms like financial aids for vulnerable groups, along with health education and a reward system for healthy behaviors, engage patients in their health management, promoting better outcomes and satisfaction. These strategies underscore the importance of an integrated approach to healthcare delivery, emphasizing efficiency,

communication, environment, and personalized care for improving patient experiences and outcomes.

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