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What determines behavioural intention in health services? A four-stage loyalty model

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Abstract

Purpose – This study aims to deal with the paucity of studies in the stages of the development of loyalty behaviour of customers in the healthcare context by incorporating three crucial service quality dimensions (physical environment, personnel quality and technical quality) and also investigating trust and commitment as mediating factors.

Design/methodology/approach – Survey data were obtained from 420 respondents admitted to government hospitals in Kerala employing a convenience sampling method. The formulated hypotheses were tested using partial least square structural equation modelling.

Findings – Results indicate that patient satisfaction, trust and commitment can create favourable behavioural intentions amongst patients. When patients reveal higher trust, they are more inclined to value healthcare services and willing to commit to a long-term relationship, resulting in increased patient loyalty.

Practical implications – Organisational efforts should improve trust and commitment and build a good relationship between service providers and patients. Efforts should be taken to raise the standard of technical and personnel aspects, and a focus on physical infrastructure should also be considered to build a favourable behavioural intention to revisit and positive referrals.

Originality/value – This is the first empirical study to analyse technical quality, personnel quality and physical environment along with the mediating effect of trust, and commitment in a four-stage loyalty development model in the healthcare context of Kerala, India.

Keywords Service quality dimensions, Patient satisfaction, Trust, Commitment, Loyalty development, Behavioural intention

Paper type Research paper

1. Introduction

The healthcare system in a developing country like India is continually changing and improving to fulfil the needs of customers (patients), and nowadays, patients are becoming more health-conscious (Singh *et al.*, 2022; Ferreira *et al.*, 2023). To develop strategies to improve customer satisfaction and generate revenue, health service providers are interested in studying customer attitudes and buying decisions (Suhartanto *et al.*, 2020). Businesses have been increasingly interested in knowing customer behaviour and the factors affecting their decision-making process to enhance and preserve a valuable customer base (Palalic *et al.*, 2021; Woratschek *et al.*, 2020; Theeruvengadum, 2022). Customers with favourable behavioural intentions are expected to purchase more, expend more and suggest others (Woratschek *et al.*, 2020). This study is intended to analyse elements determining the

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behavioural intention of admitted patients. The model developed by Oliver (1997) was taken as a theoretical lens for proposing our conceptual model for this study. The model for this study assumes that healthcare service quality is evolved by functional elements of cognition, patient satisfaction is determined by affective or emotional encounters, trust and commitment are determined by conative and behavioural intention is determined by the action. Satisfaction and loyalty in service marketing are strongly correlated, and their intimate relationship is asymmetric, as suggested by experts trying to understand customer attitudinal loyalty (Oliver, 1999). Customer satisfaction can be a reason for being loyal to the service provider, but it is a critical debate topic in service marketing research, whether all satisfied customers are loyal customers or not (Oliver, 1999; Ariffin *et al.*, 2022) emphasises the need for critically analysing the function of trust and commitment in the healthcare context.

Given that the healthcare industry is undergoing an instant alteration to accommodate growing expectations, satisfaction and loyalty behaviour are widely emphasised as the key indicators of healthcare providers' success. A review of prior studies shows that the majority of academic studies on antecedents of loyalty tend to be more focused on outpatient services than on inpatient services, which are rare in the prevailing literature (Radu *et al.*, 2022; Ariffin *et al.*, 2022). A limited number of literature are currently accessible on the development of loyalty behaviour within the framework of hospital stays in government healthcare settings. Regarding the different landscapes of the service offered, research concentrating on admitted patients' encounters with public hospital settings demands a specific set of actions to examine the stages of development of loyalty behaviour that are not like those of privately owned hospitals. To fill these gaps, this study suggests a comprehensive view of the stages of the development of loyalty behaviour in the healthcare context.

2. Literature review and hypotheses

2.1 Service quality dimensions and patient satisfaction

According to Ahrholdt *et al.* (2017), service quality means "customers' entire perception of service experience, which includes service dimensions and related aspects". The proper delivery of service emphasises the service provider's tangible, human, procedural and technical features, forming a sense of service quality (Tigu and Tapescu, 2015). The current study suggests three service quality dimensions applicable to the service marketing context: physical environment, personnel quality and technical quality. The physical environment speaks of the equipment, layout and atmosphere. The behaviour and competence of physicians, nurses and other supporting medical staff represent personnel quality in healthcare. Healthcare service delivery in terms of accuracy and promptness is described as technical quality (Gronroos, 1984; Chen *et al.*, 2011). The outcome of several studies has demonstrated that quality is an essential constituent of the first stage of loyalty formation, i.e. cognitive loyalty (Kijima *et al.*, 2021; Ahrholdt *et al.*, 2019; Han and Hyun, 2012).

According to Oliver (1997), "customer satisfaction reflects a judgement that a healthcare service exceeds patient service expectations". In the present scenario, patients become health conscious and demand high-quality health services. Quality, in turn, affects the satisfaction level of patients and ultimately leads to favourable behavioural intention, which is considered an essential element for success in terms of growth, survival and profitability (Anabila *et al.*, 2020; Radu *et al.*, 2022). Furthermore, customer satisfaction has been shown in prior empirical research to be a crucial result of quality of service, indicating that providing quality service is critical for higher satisfaction (Swain and Singh, 2021; Giovanis *et al.*, 2018). As service quality improves, customer satisfaction increases (Teeruvengadum, 2022). It may be developed and sustained if this association is well understood in the service marketing context, particularly in healthcare service.

Many earlier researchers have suggested a strong influence of cognitive loyalty on affective loyalty, i.e. service quality on customer satisfaction (Huang *et al.*, 2021; Ryu *et al.*, 2012; Chen *et al.*, 2011). The service environment's design, style, layout and equipment strongly influence the overall quality and satisfaction level of patients (Ariffin *et al.*, 2022; Ittamalla and Kunamneni, 2019; Fatima *et al.*, 2018; Radu *et al.*, 2022). Similarly, past studies exposed a strong association between personnel quality and customer satisfaction in the healthcare context (Chen *et al.*, 2011). Prior studies also revealed that technical quality has a high degree of substantial impact on the satisfaction level of patients (Hadeler *et al.*, 2021; Padma *et al.*, 2010). Based on these observations, the following hypotheses were formulated:

H1. The physical environment has a significant impact on patient satisfaction.

H2. Personnel quality has a significant impact on patient satisfaction.

H3. Technical quality has a significant impact on patient satisfaction.

2.2 Trust, commitment and patient satisfaction

Existing literature supports trust and commitment as the basic requirements for emerging and maintaining valuable relationships (Huang *et al.*, 2021; Chang *et al.*, 2013). Trust, considered a significant predictor of the quality of a relationship, is an expectation that engaging parties (healthcare provider and customer) will behave in a way that benefits each other (Gronroos, 2000). Trust in a healthcare context is the positive expectation that the medical service provider will meet all the requirements of the patient, and it forms a mutual understanding (Trust) between patients and the health service providers (LaRosa and Danks, 2018; Moreira and Silva, 2015). Healthcare providers and patients are independent entities with separate existences. Trust is formed when the patient and healthcare provider value characteristics of a reciprocally beneficial and long-lasting relationship (Morgan and Hunt, 1994). Trust is well-thought-out as a critical factor in the association between patients and medical staff since it can lower patient discomfort and issues in performing patient-care-related duties (Sutthiparinyanon and Puyod, 2023; Wan *et al.*, 2020; LaRosa and Danks, 2018; Bonds *et al.*, 2004) and ensure enhanced well-being and standard of living (Chandra *et al.*, 2018). Patients' evaluation of honesty, sincerity, expertise, benevolence, integrity and caring attitude has been proven to develop trust in a healthcare context (Adomah-Afari *et al.*, 2019; Shie *et al.*, 2022).

According to Moliner (2009), "Commitment is the highest level of relational bond and implies the willingness of an exchange partner to make short-term sacrifices to achieve long-term benefits". Commitment is generally acknowledged as a crucial component of building long-term relationships. Commitment towards the service provider-patient relationship suggests that patients value such relationships more and are captivated by maintaining long-lasting and steady relationships with healthcare service institutions (Morgan and Hunt, 1994). This relationship can highly influence their revisit decision and willingness to recommend service experiences to others (Moreira and Silva, 2015). Commitment in service marketing can be explained from three different perspectives: a strong desire to establish enduring relationships with the service provider, a readiness to make the small sacrifices if necessary to maintain such relationships and the ability and willingness to maintain trust in such relationships.

Existing literature provides evidence that patient satisfaction is a prerequisite for maintaining a long-term relationship (Sugandini *et al.*, 2017), as well as increased satisfaction can create trust (Kassim and Abdullah, 2010; Jani and Han, 2011) and commitment (Ou *et al.*, 2011; Chung and Shin, 2010) towards the service provider. Previous studies found that satisfaction can influence trust and commitment (Goodrich and Lazenby, 2022; Moliner, 2009;

Bettencourt and Brown, 1997; Zeithaml *et al.*, 1996). Grounded on these observations, the following hypotheses were formulated:

H4. Patient satisfaction has a significant impact on trust.

H5. Patient satisfaction has a significant impact on commitment.

2.3 Behavioural intention, trust and commitment

Customer loyalty must be maintained and expanded to ensure the service provider's long-term success. Behavioural intention indicates "a return or revisits to a facility or service and a willingness to make positive referrals" (Baker and Crompton, 2000). Willingness to revisit the service provider is observed as an important indicator of customer loyalty (Oliver, 2010). Behavioural intentions can be favourable or unfavourable regarding the nature of intentions. Zeithaml *et al.* (1996) observed that favourable behavioural intents improve the patient–provider relationship when good service assessments are considered important indicators of future behaviour. Positive recommendations and remarks about a service provider, ready to make the extra payment if cost increases and continuing loyalty to the service irrespective of the availability of other options and opportunities constitute favourable or desired behavioural intentions (Zeithaml *et al.*, 1996). Prior researchers utilise the behavioural intention to demonstrate customer loyalty, but the final stage (action loyalty) is challenging to observe and assess (Wu, 2011). Consumers who stick with a service provider are more likely to use them again, share and promote it to friends, colleagues and prospective customers and serve as advertising agents spreading positive referrals (Aslam *et al.*, 2019; Wu, 2011; Kethan and Basha, 2022).

Patient loyalty is often reported to be significantly influenced by patient satisfaction, trust and commitment (Sugandini *et al.*, 2017; Chang and Wang, 2011). Better service quality, higher satisfaction and good relationship quality in terms of good relationships result in favourable behavioural intentions, finally creating loyal customers (Khan *et al.*, 2019; Kim *et al.*, 2008). Though existing literature strongly supports the direct impact of patient satisfaction on behavioural intention (Sheng and Liu, 2010; Chang and Wang, 2011), focus must be paid to the function that trust and commitment serve as mediators between satisfaction and behavioural intention (Dhagarra *et al.*, 2020). It has been observed that both variables play a crucial role in the formation of healthy relationships (Shaya *et al.*, 2019), while all these three factors significantly improve customer intention to revisit and referrals. These associations have been well investigated in the healthcare context, and many prior studies have indicated that trust and commitment have significant effects on behavioural intention both directly and indirectly (Olesen and Bathula, 2022; Moreira and Silva, 2015). Based on these observations, the following hypotheses were formulated:

H6. Patient satisfaction has a significant impact on behavioural intention

H7. Trust has a significant impact on behavioural intention

H8. Commitment has a significant impact on behavioural intention

H9. Trust positively mediates the relationship between patent satisfaction and behavioural intention.

H10. Commitment positively mediates the relationship between patient satisfaction and behavioural intention.

Premised on the hypothesised relationship deliberated in the preceding sections, we propose a conceptual model for empirical validation, as shown in Figure 1.

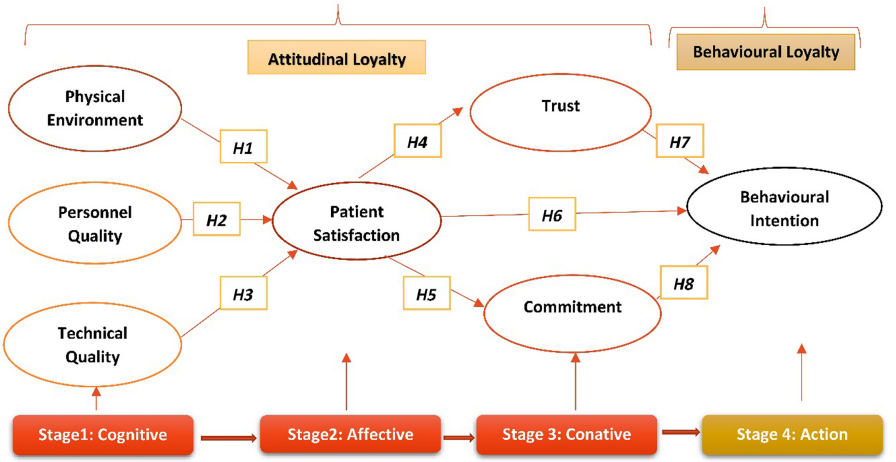


Figure 1.
Conceptual model

Source(s): The authors

3. Research gaps and objectives

In the existing literature, the quality-satisfaction-loyalty relationship is attempted to address appropriately. However, the contribution of trust and commitment to revisiting intention and positive referrals need to be identified and investigated in a healthcare context. By concentrating on satisfaction, trust and commitment (affective and cognitive stages) as mediating variables, this study attempted to cover this emptiness in the existing works. Furthermore, this study addressed service quality as a multidimensional construct incorporating physical environment, personnel quality and technical quality as dimensions, which are different from existing models for examining the quality of healthcare services.

Donabedian's model identified seven dimensions for measuring healthcare service quality: effectiveness, efficacy, optimality, efficiency, legitimacy, acceptability and equity (Donabedian, 1997). Boshoff and Gray (2004) defined service quality in seven dimensions: effective communication, physical infrastructure, empathy, delivery of prompt service, administrative staff responsiveness, security and responsiveness of doctor. However, these studies could not address the importance of technical quality in healthcare services and its effect on patient satisfaction, which is critical for the long-lasting success of service providers. The standard of healthcare services is correlated with the calibre of the workforce and the availability of adequate modern physical infrastructure. These three dimensions can assess healthcare service quality thoroughly because these dimensions examine the physical aspect, the human aspect and the result or outcome aspect of healthcare service delivery. Patient satisfaction is mainly associated with infrastructure, human and outcome elements. Further, this study aimed to fill the gap in the literature by examining the significance of these three service quality dimensions on patient satisfaction, which remain unexplored in the existing literature.

Thus, the current study's objective is to propose and validate a loyalty model consisting of four stages personnel, technical and physical environment quality as service quality dimensions in the cognitive stage and including trust and commitment in the conative stage. This study is the first to report on the impact of the cognitive stage, affective stage and conative stage of loyalty behaviour (attitudinal loyalty) on the action stage of loyalty (behavioural loyalty). Therefore, this study will facilitate healthcare managers and marketers

in their decision regarding improving quality, satisfaction, favourable behavioural intentions and creating trust and commitment.

4. Research methodology

4.1 Instrument and measurement

The instrument for the present study contained two parts. The first part gathered demographic information of the participants such as age, educational level, gender, occurrence of visit and duration of stay. The second part measures a total of 30 items relevant to the seven factors of the suggested model that was included. Measurement items for dimensions of service quality were taken from Padma *et al.* (2010) and Hamdan *et al.* (2019), patient satisfaction from Murti *et al.* (2013), measures of trust and commitment were taken from Morgan and Hunt (1994) and behavioural intention from Murti *et al.* (2013) and Pevec and Pisnik (2017). These factors were pilot-examined by 30 admitted patients and suggestions received from physicians and medical staff were also considered. A five-point rating scale ranging from strongly disagree (1) to strongly agree (5) was used to rate all research items. Table 1 shows the factor-wise list of survey items used in the study.

4.2 Sampling and data collection

Patients who received inpatient services from government hospitals in Kerala, and have been discharged constituted the population for this research. The respondents were selected employing a convenience sampling method rendering to the standard that they were admitted as inpatients for two days minimum. A total of 600 questionnaires were distributed to respondents, and 434 patients replied, the response rate being 72.3%. The responses of 420 patients were taken up for final analysis after deleting all the unnecessary items from the total of 434 responses. As Alreck and Settle (1985) recommended, if the population is more than ten thousand, a sample size between two hundred and thousand is acceptable. The sample size in similar studies (Suhartanto *et al.*, 2020; Lai *et al.*, 2020; Kondasani and Panda, 2015) also supported this argument.

4.3 Demographics

The demographic profile of the sample had 49% male respondents and 51% female respondents. Moreover, 19% of the respondents were less than 30 years and 37% were in between 31 and 60 years and 44% were above 60 years old. Out of 420 selected samples, 31% of respondents have plus two as their educational qualification. A total of 28% of respondents are graduates. Two of the respondents have educational qualifications Up to SSLC and 17% are postgraduates. Regarding the duration of hospital stay, 35% of respondents have stayed in the hospital for 11–15 days followed by 6–10 days (31%), 2–5 days (25%) and 9% of respondents stayed for more than 15 days. The frequency of visits was also enquired about, and responses showed that 38% of the respondents were admitted more than four times, followed by 32% of the respondents who were admitted for the second time, 16% of the respondents were admitted for the first and 16% of the respondents were admitted for the third time.

5. Data analysis and results

Partial least square structural equation modelling (PLS-SEM) with Smart PLS 4.0 was employed as the tool for data analysis. PLS-SEM has been extensively used as an analytic method in service marketing research across a range of settings. According to Hair *et al.* (2017), PLS-SEM is a regression-based method that may be used to evaluate complicated structural models.

Construct	Item description	Reference(s)
PE-1	Modern and up-to-date ventilators and other equipment are available	Hamdan *et al.* (2019)
PE-2	This hospital can expand its capacities when an emergency occurs	Padma *et al.* (2010)
PE-3	The hospital's physical facilities along with its employees are visually appealing	
PE-4	It is easy to find care facilities	
PE-5	The cleanliness (toilets, rooms and wards) in the hospital is really good	
PQ-1	The hospital made available adequate medical staff and supporting staff	Hamdan *et al.* (2019)
PQ-2	Doctors, nurses and supporting staff attained competency and skill and they have updated knowledge	Padma *et al.* (2010)
PQ-3	The hospital staff maintained a friendly and caring attitude	
PQ-4	The teamwork of doctors and nurses is good	
PQ-5	During consultancy, hospital staff initiated to creation of general health awareness and safety measures	
TQ-1	Shortage of testing supplies and extended waits for results affected the hospital's capacity to keep an eye on patient's health	Hamdan *et al.* (2019) Padma *et al.* (2010)
TQ-2	The treatment I received would yield the finest outcome available from the facilities	
TQ-3	The quality of treatment that the hospital offered was exceptional as well as by protocols	
TQ-4	The hospital has maintained accurate diagnosis, and good test results and the suggested medical care was necessary and effective	
PS-1	Overall, I feel satisfied with all the facilities and services offered by the hospital	Murti *et al.* (2013)
PS-2	I am pleased that I chose to have my treatment at this institution	
PS-3	Overall, I feel better than I anticipated regarding the treatment services	
PS-4	I am pleased that the treatment's outcomes are as good as they possibly get	
Trust-1	The patients feel that they are going to be treated successfully	Morgan and Hunt (1994)
Trust-2	I am willing to rely on this healthcare provider given that I trust them	
Trust-3	The hospital gives importance to the best interest of patients	
Trust-4	Overall, this health service provider is capable and proficient	
Com-1	I would not stop using this healthcare service provider because I like the intimacy and connection I have with the hospital	Morgan and Hunt (1994)
Com-2	I want to stay a part of the group of customers who resort to this healthcare service provider due to my rewarding relationship with the hospital especially during the crisis	
Com-3	This hospital has the ability and willingness to fight against Covid like pandemic situations and I have an emotional attachment to the service provider	
BI-1	I am willing to share positive things and ready to recommend this healthcare provider to others who value my opinion	Murti *et al.* (2013) Pevec and Pisnik (2017)
BI-2	I will tell my friends and family to come see this hospital	
BI-3	This hospital would be my first choice If I even needed medical service	
BI-4	I would go to other medical facilities owned by the same group of institutions	
BI-5	If the hospital's out-of-pocket expenses increased in comparison to other hospitals, this one would be my first preference	

Source(s): Compiled by authors

Table 1. Factor-wise list of survey items

5.1 Measurement analysis

Anderson and Gerbing (1988) suggested a two-phase modelling method for theory development and validation that employs SEM to empirically examine the measurement model (i.e. operational) and structural model (conceptual). The measurement model specifies

the relationship between observed indicators and related latent variables (Wong, 2013). Factor loading and internal consistency reliability are examined to confirm the measurement model's strength. Table 2 shows the convergent validity and reliability of the data. Table 3 shows the discriminant validity of data. Factor loadings greater than 0.5, composite reliability (CR) greater than 0.7 and average variance extracted (AVE) more than 0.5 are indicative of convergent validity (Fornell and Lacker, 1981; Gefen *et al.*, 2000; Bagozzi *et al.*, 1991).

The discriminant validity was examined by determining whether the correlations between a certain construct and others (Fornell and Lacker, 1981) were less than the square root of the AVE for each construct, as seen in Table 3.

5.2 Structural analysis

The structural model is used to test the explanatory capacity of the model as well as hypotheses testing. The outcome of the structural model evaluation may be used to investigate the model's extrapolative power and the relationship amongst the various constructs under study (Hair *et al.*, 2017). R^2 values (coefficients of determination) range from zero to one. R^2 values above 0.75, between 0.50–0.75 and above 0.25 but below 0.50 are regarded as substantial, medium and weak, respectively, for the marked constructs (Hair *et al.*, 2017). Table 4 presents the endogenous variables and their respective R^2 and adjusted

Construct	Measurement items	Loadings	α	C.R	AVE
Physical environment	PE1	0.867	0.880	0.913	0.680
	PE2	0.879			
	PE3	0.689			
	PE4	0.885			
	PE5	0.785			
Personnel quality	PQ1	0.759	0.843	0.887	0.612
	PQ2	0.741			
	PQ3	0.739			
	PQ4	0.852			
	PQ5	0.815			
Technical quality	TQ1	0.737	0.832	0.887	0.664
	TQ2	0.820			
	TQ3	0.891			
	TQ4	0.804			
Patient satisfaction	PS1	0.912	0.900	0.930	0.664
	PS2	0.873			
	PS3	0.838			
	PS4	0.884			
Trust	Trust1	0.803	0.876	0.915	0.769
	Trust2	0.904			
	Trust3	0.907			
	Trust4	0.800			
Commitment	Comm1	0.888	0.838	0.902	0.755
	Comm2	0.896			
	Comm3	0.820			
Behavioural intention	BI1	0.832	0.807	0.865	0.567
	BI2	0.869			
	BI3	0.798			
	BI4	0.629			
	BI5	0.599			

Note(s): α: Cronbach's reliability, CR: composite reliability, AVE: average variance extracted
Source(s): Authors' survey

Table 2.
Measurement model outcomes

Table 3.
Discriminant validity of constructs (Fornell and Lacker criterion)

	PE	PQ	TQ	PS	Tru	Com	BI
PE	*0.824*						
PQ	0.472	*0.782*					
TQ	0.225	0.225	*0.814*				
PS	0.547	0.462	0.331	*0.814*			
Tru	0.518	0.438	0.323	0.781	*0.876*		
Com	0.478	0.516	0.368	0.691	0.791	*0.868*	
BI	0.524	0.338	0.233	0.615	0.747	0.631	*0.752*

Note(s): PE – physical environment, PQ – personnel quality, TQ – technical quality, PS – patient satisfaction, Tru – trust, Com – commitment, BI – behavioural intention; The decision criteria for discriminant validity are represented diagonally in italic
Source(s): Authors' survey

Table 4.
Results of structural model analysis (R^2 values)

Constructs	*R* square	*R* square adjusted
Patient satisfaction	0.364	0.278
Trust	0.610	0.476
Commitment	0.477	0.359
Behavioural intention	0.674	0.486

Source(s): Authors' survey

R^2 values. The findings show that the explanatory capacity of trust and behavioural intention is medium, whereas that of commitment and patient satisfaction is weak.

The β value (path coefficient) suggests the intensity of the cause-and-effect association between the constructs and is employed to evaluate the theories considering the *p*-value, as shown in Table 5. The significance of path coefficient values was determined by means of the bootstrapping approach. Regarding the quality dimensions, the physical environment is the highest factor influencing patient satisfaction, followed by personnel quality and technical quality. These findings corroborate with Ampaw *et al.* (2020) and Fatima *et al.* (2018) that the physical environment affects patient satisfaction, and personnel quality positively affects patient satisfaction (Rakhmawati *et al.*, 2013; Padma *et al.*, 2010; Duggirala *et al.*, 2008), technical quality positively affects patient satisfaction (Dagger *et al.*, 2007). Further, our findings are in line with Kondasani and Panda (2015) that patient satisfaction has a significant positive effect on behavioural intention, and the positive effect of trust and

Table 5.
Result of hypothesis testing (path coefficients)

Casual Path	Path coefficient	*t*-value*	Hypothesis testing	*p* value
Physical environment → patient satisfaction	0.190	3.731	H1 – Supported	0.001
Personnel quality→ patient satisfaction	0.418	8.328	H2 – Supported	0.001
Technical quality→ patient satisfaction	0.174	5.025	H3 – Supported	0.001
Patient satisfaction→ trust	0.781	32.141	H4 – Supported	0.001
Patient satisfaction→ commitment	0.691	25.546	H5 – Supported	0.001
Patient satisfaction→ behavioural intention	0.412	10.039	H6 – Supported	0.001
Trust→ behavioural intention	0.192	3.464	H7 – Supported	0.001
Commitment→ behavioural intention	0.295	5.189	H8 – Supported	0.001

Note(s): *t-values: significant at $p < 0.001$
Source(s): Authors' survey

commitment on patient satisfaction also following some previous studies (Sugandini *et al.*, 2017; Sohn *et al.*, 2013; Liu *et al.*, 2011).

Figure 2 presents the structural model with the R^2 values for each endogenous variable and the path coefficients.

5.3 Mediation analysis – results

The mediating role of trust and commitment between patient satisfaction and behavioural intention was examined. Table 6 shows that trust and commitment partially mediate the influence of patient satisfaction on behavioural intention. This finding corroborates previous findings (Kim and Han, 2008; Jani and Han, 2011).

6. Discussion and implications

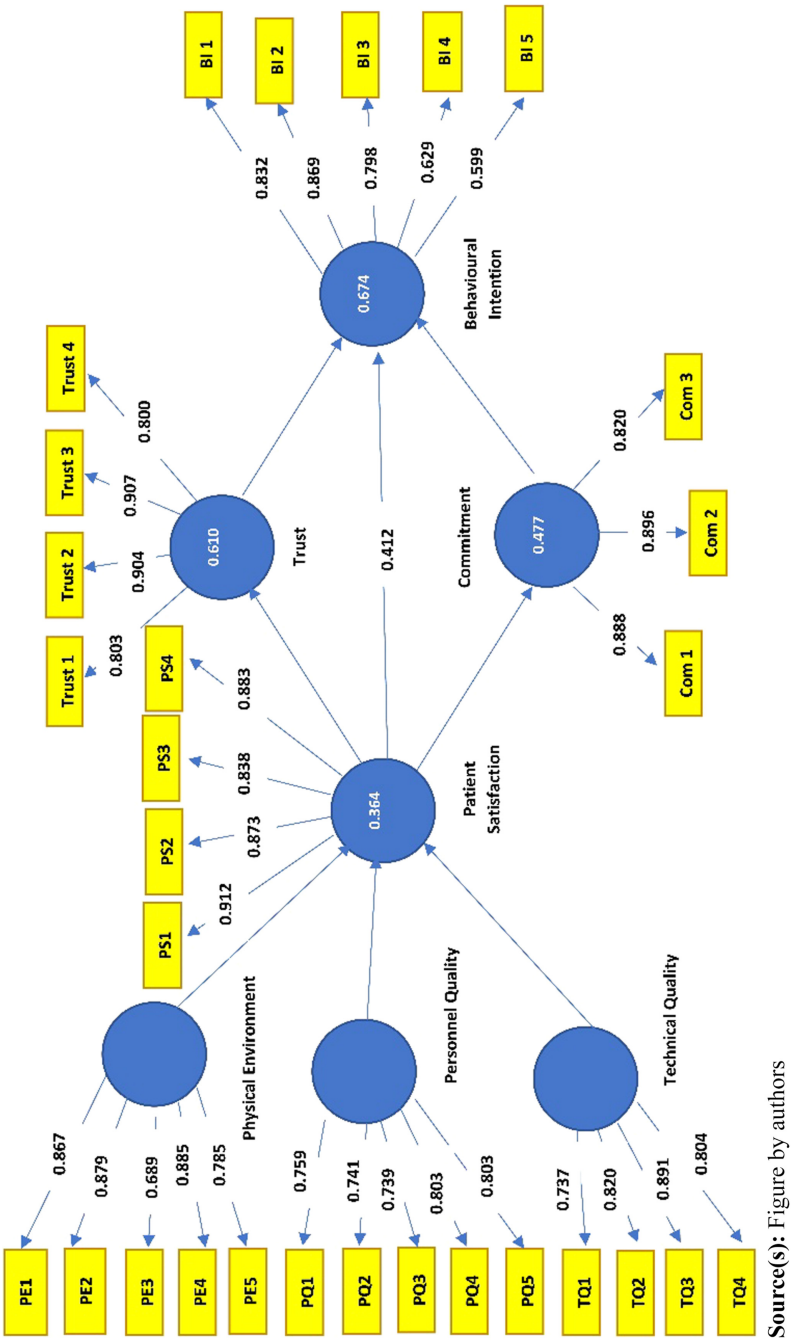
6.1 Discussion

This paper proposed and tested an integrative model to critically examine the impact of service quality and its dimensions (1) physical environment (2) personnel quality and (3) technical quality on patient satisfaction and patient loyalty in Kerala, India. The findings validated the model and supported that service quality dimensions play a crucial part in developing patient loyalty by instigating patient satisfaction. The results also demonstrate that, in the healthcare industry, patient commitment and trust operate as mediators in the link between customer loyalty and customer satisfaction.

Firstly, our findings demonstrate that all three aspects of service excellence significantly contribute to patient satisfaction. This implies that physical infrastructure and tangibles hold a prominent role in shaping patients' service experience and their satisfaction level. The findings also highlight the importance of personnel quality and technical quality to the overall experience, satisfaction and loyalty development. Secondly, examining the impact of patient satisfaction on behavioural intention, the result supported that, patient satisfaction has a substantial impact on developing behavioural intention of patients, such as revisit intention and willingness to recommend. This implies that patient satisfaction with the healthcare experience enhances their favourable behavioural intention towards the health service provider (Giovanis *et al.*, 2018). Lastly, the findings based on the examination of the function of trust and commitment between behavioural intention and patient satisfaction showed that both trust and commitment have a moderating effect between satisfaction and behavioural intention. Thus, if the degree of faith and dedication is higher, the behavioural intention towards the service provider also tends to be favourable.

6.2 Theoretical contributions

The most important contribution of this paper from a philosophical perspective is the validation of a model that predicts the behavioural intention for a revisit and positive referral of patients by redefining the four-stage loyalty model of Oliver (1997). The model is redefined with the incorporation of the physical environment, personnel quality and technical quality as service quality dimensions in the cognitive stage and the inclusion of trust and commitment in the conative stage of the four-stage loyalty model. The empirical evidence shows that service quality dimensions impact patient satisfaction to pull loyalty behaviour into the next loyalty stage, i.e. the affective stage is a significant theoretical contribution of the current study. The incorporation of trust and commitment in the conative stage of loyalty formation and their ability to predict patients' behavioural intentions is a distinct theoretical contribution of this study. Further, the validation of commitment and trust as mediating variables in the linkage between patient satisfaction and behavioural intention in the redefined four-stage loyalty model is another theoretical significance of this empirical study.



Source(s): Figure by authors

Figure 2.
Structural model showing R^2 values and path coefficients

The validated model is unique in the sense that it bifurcates the redefined four-stage loyalty model into attitudinal loyalty and behavioural loyalty, whereby the first three phases (conative, affective and cognitive) form attitudinal loyalty and the last stage (action loyalty) forms behavioural loyalty and the empirical evidence that attitudinal loyalty leads to behavioural loyalty.

6.3 Practical implications

The finding that patients assessed medical service quality based on physical environment and that it is amongst the most significant factors that precede patient satisfaction suggests that accessibility to modern and up-to-date ventilators and apparatus, the ability of hospitals to expand their generous capacity a visually appealing, clean and pleasant environment, incorporating a warm service atmosphere and making proper arrangements are essential to contribute towards the satisfaction level of patients.

The study's findings that personnel quality positively affects patient satisfaction indicate that the availability of adequate staff is more significant in providing quality healthcare services. They should have updated knowledge and skills to handle unforeseen pandemics or similar situations. Hospital management must prioritise maintaining a friendly and caring attitude of medical staff to enhance the satisfaction level of patients. Hospitals should take an active role in supporting government measures by creating awareness regarding the well-being and maintenance of healthy lives of the general public.

The finding that technical quality has a favourable effect on patient satisfaction suggests that hospital management should ensure the availability of adequate laboratory facilities for a long time to get test results, which may cause dissatisfaction amongst the patients. To enhance technical quality, hospitals should make strategic decisions to provide high-standard medical services. Accurate diagnosis, better results and prescribing medical treatment, which is necessary, can create satisfied patients. Improvements in the above-mentioned quality service dimensions accelerate patient satisfaction. Hence, hospital managers must be informed that the three service quality dimensions discussed here are essential in the modern healthcare environment.

The results indicate that patient satisfaction, trust and commitment can create favourable behavioural intentions amongst patients. Higher levels of trust amongst patients increase their propensity to appreciate medical treatments and they become more willing to commit to a long-term relationship, resulting in increased patient loyalty. A health service provider can build customer trust by creating confidence that patients will be treated successfully. The hospital management and staff should prioritise the best interest of patients, and they should attain proficiency and capability to handle pandemic situations to instil trust and confidence in the service provider. Commitment can be developed by fostering a positive working relationship between the customer and the service provider. Hospital management can make efforts to form an emotional bond between the provider and patient to create confidence that

Hyp	Relation between variables	Direct effect	Indirect effect	Total effect	*t*-value	*p* value
H9	Patient satisfaction → trust → behavioural intention	0.412	0.150	0.562	5.093	0.001
H10	Patient satisfaction → commitment → behavioural intention	0.412	0.204	0.616	5.093	0.001

Source(s): Authors' survey

Table 6. Mediating effect of trust and commitment

the hospital has the ability and willingness to meet challenges and responsibilities in future. Thus, service providers can ensure behavioural intention to revisit and positive referrals by building patient trust and commitment.

6.4 Limitations and future research

Despite the present study's contributions, it is important to recognise its four limitations. First, the predictive power of trust and behavioural intention is medium, and patient satisfaction and commitment are weak. Therefore, there might be other factors of cognitive, affective and conative stages that can impact behavioural intention. Therefore, more research might re-examine this four-stage model to incorporate other elements that contribute to deepening our understanding of the stages of the development of loyalty behaviour. Further, a deep investigation of the role of affective, normative and continuance commitment in building behavioural intention might interest future researchers. Second, this study was amongst the patients admitted to government hospitals only. Consequently, we advise additional validation of the redesigned four-stage loyalty model across all patient groups before extrapolating the study's findings. Lastly, we conduct a cross-sectional study and suggest a longitudinal study to appraise the validity of the conclusions of this study.

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