“Sustainable business development of private hospitals in Vietnam: Determinants of patient satisfaction, patient loyalty and revisit intention”

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Sustainable Business Development of Private Hospitals in Vietnam: Determinants of Patient Satisfaction, Patient Loyalty and Revisit Intention

Abstract

The role of private hospitals is increasingly important in Vietnam. The study aims to determine associations between service quality and hospital brand image with satisfaction and patient loyalty, revisit intention at private hospitals in Vietnam. Quantitative cross-sectional data were collected from 268 patients in DaNang city, Vietnam. Scales to measure hospital service quality, hospital brand image, patient satisfaction, loyalty, and patient revisit intention were developed. The methods used to test the hypotheses of the study include exploratory factor analysis (EFA), confirmatory factor analysis (CFA), and structural equation modeling (SEM). One notable finding in this study provides practical evidence on the relationship of hospital service quality and hospital brand image with patient satisfaction and loyalty. In addition, service quality has a direct influence on patient satisfaction and revisit intention as the indicator of patient loyalty. Meanwhile, hospital brand image has a direct influence on patient loyalty, although it did not influence patient satisfaction. Results of this study help providing the basis for the marketing and customer care programs of private hospitals in DaNang city, Vietnam.

INTRODUCTION

The healthcare sector in the market economy is witnessing competition among hospitals in attracting patients to use medical services at these hospitals. The patient-centered philosophy requires hospital managers and leaders to have appropriate strategies in attracting new customers, as well as ensuring patient satisfaction and loyalty, thereby ensuring business success. Previous studies have shown that loyal customers tended to pay more when using medical services, as well as having less resistance with the service delivery process (Evanschitzky et al., 2012). The cost to retain the patient was also significantly less than the cost to attract new patients. However, characteristic of the healthcare field is that most patients only visit the hospital when they have a desire to have their illness diagnosed and treated, and they mostly have no desire to return hospital if not for their illness (Liu et al., 2021). This has created great challenges in maintaining the loyalty of patients. Studies investigating factors related to patient satisfaction and loyalty have been performed around the world (Al-Damen, 2017; Aliman & Mohamad, 2016; Bentum-Micah et al., 2020; Nguyen & Nguyen, 2014; Juhana et al., 2015; Liu et al., 2021; Wu, 2011; Yesilada...
& Direktör, 2010; Zarei et al., 2012; Zarei et al., 2015). These studies play an important role in deciding the right marketing strategy for each hospital. Several previous studies have shown the important role of factors such as hospital brand image and service quality in patient satisfaction and loyalty (Aliman & Mohamad, 2016; Ware et al., 1978). However, in each country and each sector, the degree of influence of these factors is different. Therefore, understanding the relationships between these factors is necessary to support the efforts of hospitals in improving the performance of their service delivery.

Vietnam is one of the countries with fast economic growth, leading to a rapid increase in people’s demand for high-quality healthcare. It is estimated that the healthcare market in Vietnam reached 19.9 billion USD in 2020 and is expected to reach 22.7 billion USD in 2021 with an annual growth rate of 12.5% (Spire Research & Consulting Pte Ltd, 2020). However, the healthcare market in Vietnam is mainly dominated by public hospitals, while the private sector accounts for only a small proportion with an estimated total market of USD 8.7 billion by 2020 (Spire Research & Consulting Pte Ltd, 2020). According to the report of the Ministry of Health, in 2019, the total number of private hospitals increased from 102 hospitals (2010) to 231 hospitals with approximately 16,000 beds, accounting for 19.4% of the total number of hospitals in Vietnam (Vietnam Ministry of Health, 2019). Currently, private hospitals have advantages over public hospitals in making quick decisions and optimizing resources, as well as the ability to deploy extensive marketing activities and medical services which public hospitals do not have the financial and administrative capacities to perform (Nguyen & Wilson, 2017). However, some studies have revealed significant disparities in the service quality provided by public hospitals and private hospitals (Nguyen & Nguyen, 2014; Tran et al., 2005). In addition, the Vietnamese government is promoting the autonomy of public hospitals in terms of administrative and financial aspects (London, 2013). This could diminish the existing advantages of private hospitals and increase competitiveness among hospitals. Therefore, determining the factors affecting patient loyalty is a key for the survival and sustainable development of private hospitals. Currently, no studies have been conducted to evaluate the factors related to patient loyalty and revisit intention in Vietnam. Therefore, this study aims to identify some associated factors, namely hospital service quality and hospital brand image, with patient satisfaction, patient loyalty, and revisit intention at private hospitals in DaNang city, Vietnam.

1. LITERATURE REVIEW

1.1. Definitions

Hospital brand image is defined as an intangible asset of the hospital, formed from the quality that patients perceive and the value of the hospital, in other words, the impression of patients and customers about the hospital (Yagci et al., 2009). Hospital brand is a factor that helps to ensure the sustainable development of the hospital, as well as the uniqueness of the hospital in the perception of patients (Roberts & Dowling, 2002). A positive hospital image helps to position the hospital brand in the market, demonstrating patient trust in the hospital (Kim et al., 2008a). However, the hospital brand image always changes depending on the patient’s perception and experience. Therefore, a good hospital brand image promotes the patient choice of hospital services.

Service quality is widely recognized as one of the key factors affecting the business performance and outcomes of service organizations (Liu & Tsai, 2010; Mei-Liang & Kuang-Jun, 2013). Service quality refers to the customer or patient assessment of the actual service compared to their expectations (Bitner et al., 1991; Parasuraman et al., 1988; Zeithaml, 1988). In fact, before using a service, patients will have expectations about what they will get when they use that service, then they compare this expectation with the actual service they receive (Wu, 2011). Service has quality when it ensures to meet the patient’s expectations (Lytle & Mokwa, 1992).

Patient satisfaction refers to the patient attitude during the whole process of using healthcare services, including before, during, and after utilization (Kim et al., 2008b). Patient satisfaction is also related to whether the service meets the patient’s expectations. It is an important metric in monitoring and evaluating hospital performance,
Problems and Perspectives in Management, Volume 19, Issue 4, 2021

which is used by healthcare facility leaders in their
decision-making processes. Patient satisfaction is
related to the doctor-patient relationship and af-
facts the treatment process and the re-visit of the
patients (Hekkert et al., 2009).

Loyalty is defined as a deeply held commitment to
rebuy or patronize a preferred product/service con-
sistently in the future, thereby causing repetitive
same-brand or same brand-set purchasing, despite
situational influences and marketing efforts having
the potential to cause switching behavior (Oliver,
1999). Due to the distinguishing characteristics of
the healthcare industry from other service indus-
tries as mentioned above, theories regarding cus-
tomer loyalty to other services may not be applica-
table in the healthcare field (Liu et al., 2021; Sheth &
Park, 1974). In this study, the information that will
be collected from patients will help determine their
perception of patient loyalty, thereby building tools
and scales to measure patient loyalty. In addition,
the study results also help to provide evidence on
the mechanisms of patient loyalty formation, which
will assist hospitals in developing effective market-
ing strategies and business models.

Revisit intention is considered as an aspect of loy-
alty and several previous studies in the healthcare
sector have shown a strong association between
behavioral intentions and the actual behavior of
this concept. Evaluation of revisit intention is also
a metric used to determine patient loyalty (Boshoff
& Gray, 2004; Kim et al., 2008b).

1.2. Effect of hospital service quality
on satisfaction and revisit
intention of patients

In several previous studies, hospital service quality
has a positive relationship with patient satisfaction
and it depended on hospital characteristics such
as facilities, equipment, professional qualifications
of medical staff, and administrative procedures
(Aliman & Mohamad, 2016; Ware et al., 1978). Kim et al. (2008b) conducted a study showing the relationship between these factors and patient satisfaction and this relationship applied in both public and private hospitals (Yesilada & Direktör, 2010). In addition, there have been many studies conducted showing that hospital service quality had a positive impact on patient loyalty. High hospital service quality increases the likelihood of revisit as an indicator of patient loyalty (Boulding et al., 1993; Cronin et al., 2000). Hospital service quality can affect patient intention to revisit di-
rectly, or impact indirectly through patient satisfac-
tion (Wu, 2011; Wu et al., 2008).

1.3. Effect of hospital brand image
on satisfaction and loyalty
of patients

In other industries, some studies showed that
brand image was not associated with customer
satisfaction and loyalty (Davies & Chun, 2002;
Hoq et al., 2012). However, in the healthcare sector,
the majority of studies showed that the hospital
brand image of the preferred service provider had
a positive effect on patient satisfaction (Aliman &
Mohamad, 2016; Wu, 2011). Therefore, a good hos-
pital brand image can increase patient satisfaction.
In addition, previous studies showed that hospital
brand image had a positive effect on patient loyal-
ty directly or indirectly through patient satisfac-
tion (Aliman & Mohamad, 2016; Da Silva & Syed
Alwi, 2008; Davies & Chun, 2002; Wu, 2011).

1.4. Effect of satisfaction on loyalty
and patient revisit intention

In previous studies, customer satisfaction was
considered an important predictor of loyalty with
organizations. Many studies in the healthcare sec-
tor also show the same thing. Kim et al. (2008b)
showed that patient satisfaction also had a posi-
tive impact on their intention to revisit. At the
same time, patients often express their satisfac-
tion through the evaluation of the hospital service
(Bendall-Lyon & Powers, 2004); hence, patients
having satisfaction with the service were more
likely to reuse that service.

1.5. The relationship between
hospital service quality
and facilities, staff, price,
and medical examination
and treatment process

Previous studies have mentioned that the factors
related to service quality are composed of two visi-
ble components (such as facilities, human resourc-
es, equipment, administrative processes, etc.) and invisible (such as responsiveness, transparency, empathy, etc.) (Parasuraman et al., 1988; Zaim et al., 2013). In particular, visible components play an important role when these are the factors that the patient feels and observes immediately upon arrival at the hospital.

2. AIM

This study was conducted to measure patient evaluation of the relationship between hospital service quality, hospital brand image, patient satisfaction, patient loyalty, and revisit intention at private hospitals in DaNang city, Vietnam.

3. HYPOTHESES AND RESEARCH MODEL

Based on the content of the literature review, the study proposes ten research hypotheses as follows:

H1: Service quality at private hospitals has a positive impact on patient satisfaction.

H2: Service quality at private hospitals has a positive impact on patient revisit intention.

H3: Hospital brand image has a positive impact on patient loyalty.

H4: Hospital brand image has a positive impact on patient satisfaction.

H5: Patient satisfaction has a positive impact on patient loyalty.

H6: Patient loyalty has a positive impact on patient revisit intention.

H7a: Service quality at private hospitals has a positive relationship with facilities.

H7b: Service quality at private hospitals has a positive relationship with human resources.

H7c: Service quality at private hospitals has a positive relationship with the reasonable-ness and transparency of service prices.

H7d: Service quality at private hospitals has a positive relationship with the medical examination and treatment process.

Synthesized from many previously published studies, the model used for this study is proposed in Figure 1.

4. DATA AND RESEARCH METHODOLOGY

4.1. Sampling and scale of research

A typical survey was conducted in DaNang, a tourist city in Vietnam. The city’s health system includes 86 medical facilities, with 7 private hospitals and 1,223 beds. The data collection period was
from January to March 2020. Criteria for selecting survey participants included individuals who were undergoing inpatient or outpatient treatment at private hospitals and all of them agreed to participate at the time of the survey. Regarding the study sample size, the minimum sample size for exploratory factor analysis (EFA) should be 5 times higher than the total number of observed variables in the questionnaire (Hair et al., 2006). Therefore, the questionnaire in this study has 35 observations so the sample size must be larger than 175 (35 variables x 5 = 175). 300 survey questionnaires were sent to the Customer Care Department at the hospitals and through the role of the staff to conduct the survey. A total of 268 complete questionnaires were selected for analysis. This sample size is within the appropriate sample size range compared to other studies in the world (Alhashem et al., 2011; Aliman & Mohamad, 2016; Ariffin & Aziz, 2008; Badri et al., 2009).

The structured questionnaire was built including two main parts. The first part of the questionnaire presented questions regarding patient demographics and the second part included questions measuring the variables in the proposed theoretical research model. The questions in the scale were formed based on previous studies (Al-Damen, 2017; Bentum-Micah et al., 2020; Boshoff & Gray, 2004; Coutinho et al., 2019; Juhana et al., 2015; Oliver, 1999; Zarei et al., 2012; Zarei et al., 2015) as well as supplementing questions to suit the actual context of the study site. All questions in the study used a Likert scale with five points ranging from low (1 = strongly disagree) to high (5 = strongly agree). The scale development was done through in-depth interviews with experts in the healthcare sector. Accordingly, the scale of this study included questions to measure the quality of medical examination and treatment services (QUA); facilities of private hospitals (INF) with 5 items; medical staff (STAF) with 4 items; price of medical examination and treatment services (PRI) with 4 items; medical examination and treatment procedures (PRO) with 5 items; patient satisfaction (SAT) with 4 items, patient loyalty (LOY) with 4 items, hospital brand image (IMA) with 5 items, and revisit intention (RET) with 4 entries (Table 1).

4.2. Statistical analysis

Cronbach’s alpha test is used to measure the reliability of observations in each research scale. The scale is acceptable when the Cronbach’s alpha coefficient of the scale is greater than 0.6 and the corrected item-total correlation is greater than 0.3 (Peterson, 1994). EFA was then performed on all items on the scale. In the EFA analysis, KMO

Table 1. Questionnaire items

| Constructs                  | Items of the questionnaire                                                                 | Indicators | References                          |
|-----------------------------|---------------------------------------------------------------------------------------------|------------|--------------------------------------|
| Infrastructure (INF)        | The hospital campus and environment are guaranteed to be green, clean, and beautiful         | CSVC1      | Zarei et al. (2012), Al-Damen (2017) |
|                            | Waiting rooms for family members and patients are in good condition                         | CSVC2      | Al-Damen (2017)                      |
|                            | The equipment in the ward is complete and convenient, modern                                | CSVC3      | Al-Damen (2017)                      |
|                            | Equipment used for medical examination and treatment is complete and modern                 | CSVC4      | Al-Damen (2017)                      |
|                            | The system of toilets and bathrooms in the hospital is clean                                 | CSVC5      | Al-Damen (2017)                      |
| Staff (STAF)                | The team of doctors, nurses, nurses, and medical staff is polite and friendly to patients and family members | DNGU1      | Al-Damen (2017)                      |
|                            | The team of doctors, nurses, nurses, and medical staff strictly complies with regulations and protective clothing, neat, clean, and beautiful | DNGU2      | Bentum-Micah et al. (2020)          |
|                            | A team of doctors, nurses, nurses, and medical staff is with professional competence in the examination, treatment, and patient service | DNGU3      | Zarei et al. (2012)                  |
|                            | Team of doctors, nurses, nurses, and medical staff who listen and care about each patient  | DNGU4      | Al-Damen (2017)                      |
| Fees of medical services (PRI)| Reasonable medical examination and treatment costs and drug costs                           | PHI1       | Boshoff and Gray (2004)             |
|                            | Invoices, receipts, prescriptions, and medical examination results are provided fully, clearly, transparently and explained if there are any questions | PHI2       | Developed by the authors           |
|                            | Patients are entitled to priority regimes, medical insurance payment following the regime   | PHI3       | Developed by the authors           |
|                            | The price list of medical examination and treatment services is clearly posted, publicly available, and provided to patients and family members | PHI4       | Developed by the authors           |
and Bartlett’s test were performed, average variance extracted (AVE) with significance values are less than or equal to 0.05. If AVE values are > 50%, eigenvalues are > 1, and the factor loading is > 0.55 (Hair et al., 2006). Confirmatory factor analysis (CFA) and structural equation modeling (SEM) techniques were used in this study to determine the indicators. Based on these indicators the degree of fit between the hypothetical model and the actual collected data was assessed. The model is suitable if and only if the indicators satisfy the following: Chi-square/df < 2, Comparative fit index (CFI) > 0.9, Tucker–Lewis index (TLI) > 0.9, Root mean square error of approximation (RMSEA) < 0.08 (Hair et al., 2006; Schumacker & Lomax, 2004). The significance level is p-value < 0.05 (Zarei et al., 2012).

5. RESULTS

Information on patients participating in the survey is presented in Table 2. The majority of patients surveyed were between the ages of 18 and 30.
(29.9%) and over 50 years of age (26.9%). Females accounted for the majority with 57.8%. The percentage of individuals with income from 10 to less than 15 million was the highest with 41.8%. Most of the patients had college and university education (39.2%). The majority of participants were inpatients (76.1%) and had a treatment duration of less than 1 month (32.1%).

5.1. Results of Cronbach’s alpha and EFA testing

In Table 3, the Cronbach’s alpha coefficient of all independent and dependent variables is > 0.6, suggesting that all variables in the scale have high reliability and could be included in the CFA and SEM analysis.

Table 2. Demography of respondents

| Particulars | Items                      | Frequency (n = 268) | Percentage |
|-------------|----------------------------|--------------------|------------|
| Age         | Under 18 years old         | 46                 | 17.2%      |
|             | From 18 to 30 years old    | 80                 | 29.9%      |
|             | From 31 to 50 years old    | 70                 | 26.1%      |
|             | Over 50 years old          | 72                 | 26.9%      |
| Sex         | Male                       | 113                | 42.2%      |
|             | Female                     | 155                | 57.8%      |
| Income      | Under 5 million VND/month  | 53                 | 19.8%      |
|             | From 5 to under 10 million VND/month | 70     | 26.1%      |
|             | From 10 to under 15 million VND/month | 112   | 41.8%      |
|             | Over 15 million VND/month  | 33                 | 12.3%      |
| Education   | Under high school          | 64                 | 23.9%      |
|             | High school                | 70                 | 26.1%      |
|             | Colleges and universities  | 105                | 39.2%      |
|             | Postgraduate studies       | 29                 | 10.8%      |
| Treatment time | Under 1 month         | 86                 | 32.1%      |
|             | From 1 to under 3 months  | 81                 | 30.2%      |
|             | From 3 to under 6 months  | 78                 | 29.1%      |
|             | Over 6 months              | 23                 | 8.6%       |
| Type of patients | Inpatient                | 204                | 76.1%      |
|             | Outpatient                 | 64                 | 23.9%      |

Table 3. Rotated component matrix and Cronbach’s alpha testing

| Indicators | Component | Cronbach’s alpha |
|------------|-----------|------------------|
|            | 1  2  3  4  5  6  7  8  |                  |
| CSVC5      | .847       |                  |
| CSVC2      | .825       |                  |
| CSVC4      | .825       |                  |
| CSVC3      | .822       |                  |
| CSVC1      | .805       |                  |
| HANH2      | .876       |                  |
| HANH5      | .846       |                  |
| HANH1      | .832       |                  |
| HANH3      | .831       |                  |
| HANH4      | .760       |                  |
| QTRINH4    | .899       | .907             |
| QTRINH2    | .871       |                  |
| QTRINH1    | .830       |                  |
| QTRINH3    | .815       |                  |
| QTRINH5    | .684       |                  |
5.2. CFA result

In Table 4, the reliability of factors in the model is suitable via C.R values is > 0.7, the AVE values are > 0.5, meaning that the components in the scale are reliable and have convergent validity. Correlation coefficients among factors are < 0.85, suggesting that components in the scale have discriminative validity.

Table 4. Result of composite reliability and average variance extracted testing

Source: Developed by the authors with AMOS.

| Indicators       | Component | Cronbach’s alpha |
|------------------|-----------|------------------|
| Facilities       | .977      | .896             |
| INF              |           |                  |
| PRO              | .939      | .759             |
| .852             |           |                  |
| .828             |           |                  |
| .816             |           |                  |
| DNGU1            | .932      | .896             |
| DNGU4            | .915      | .896             |
| DNGU3            | .759      | .759             |
| DNGU2            | .738      |                  |
| TTHANH1          | .841      | .928             |
| TTHANH4          | .820      | .856             |
| TTHANH3          | .793      | .856             |
| TTHANH2          | .777      | .856             |
| PHI1             | .823      | .856             |
| PHI3             | .783      | .856             |
| PHI4             | .770      | .856             |
| PHI2             | .695      | .834             |
| TKHAM4           | .788      |                  |
| TKHAM3           | .688      |                  |
| TKHAM2           | .685      |                  |
| TKHAM1           | .670      |                  |

5.3. SEM model

The results of the SEM model show that there were 5 concepts in the model: (1) Quality of medical examination and treatment services is measured through four factors: facilities, staff, cost, and procedures; (2) Patient satisfaction; (3) Patient loyalty; (4) Hospital brand image; (5) Patient intention to revisit. The test model had 546 degrees of freedom (p=0.00), Chi-square/df = 1.507 < 2; CFI = 0.959 > 0.9; TLI = 0.955 > 0.9; RMSEA = 0.044 < 0.08. This result showed that the model was suitable for the data collected (Figure 3).

The SEM model was implemented to evaluate the direct influence of independent variables such as hospital service quality and hospital brand image with dependent variables such as patient satisfaction and patient loyalty, patient revisit intention. Next, this model evaluated the direct influence of service quality on factors such as facilities, medical personnel, service prices, and medical examination and treatment processes. The results in Table 5 show that except for the relationship between satisfaction patient and hospital brand image is not statistically significant (p > 0.05), meaning that H4 is not supported, other hypotheses are supported. Specifically, hospital brand image has a direct positive effect on patient loyalty (H3: p < 0.001). Hospital
Figure 2. Standardized CFA results

Chi-square=772.715 ; df=542
Chi-square/df=1.426
GFI=.868 ; TLI=.962 ; CFI=.966
RMSEA=.040 ; P=.000
service quality has a direct positive association with patient satisfaction (H1: $p < 0.001$) and intention to re-visit (H2: $p = 0.004$). Patient satisfaction had a direct positive relationship with patient loyalty (H5: $p < 0.001$). Patient loyalty had a direct positive relationship with the intention to revisit (H6: $p < 0.001$). The evaluation results also show that hospital service quality has a direct positive correlation with facilities (H7a: $p < 0.001$), health workers (H7b: $p < 0.001$), transparent and reasonable service prices (H7c: $p < 0.001$), and medical examination and treatment process (H7d: $p < 0.001$).

Table 5. Hypotheses testing

| Path       | B     | S.E.  | C.R.   | p-value | Hypotheses |
|------------|-------|-------|--------|---------|------------|
| SAT ← QUA | .307  | .059  | 5.238  | $p < 0.001$ | Accepted H1 |
| SAT ← IMA  | -.092 | .070  | -1.314 | .189    | Rejected H4 |
| LOY ← SAT | .262  | .045  | 5.786  | $p < 0.001$ | Accepted H5 |
| LOY ← IMA  | .360  | .053  | 6.812  | $p < 0.001$ | Accepted H3 |
| INF ← QUA | .308  | .055  | 5.586  | $p < 0.001$ | Accepted H7a |
| PRO ← QUA | .203  | .053  | 3.818  | $p < 0.001$ | Accepted H7d |
| STAF ← QUA | .270  | .055  | 4.905  | $p < 0.001$ | Accepted H7b |
| PRI ← QUA | .733  | .079  | 9.311  | $p < 0.001$ | Accepted H7c |
| REP ← LOY | .404  | .046  | 8.824  | $p < 0.001$ | Accepted H6 |
| REP ← QUA | .077  | .026  | 2.911  | .004    | Accepted H2 |

Note: SAT: Patient satisfaction; QUA: Hospitals’ service quality; IMA: Hospitals’ brand image; LOY: Patient loyalty; INF: Infrastructure; PRO: Procedure; STAF: Medical staff; PRI: Price; REP: Revisit intention.

6. DISCUSSION

With the increasing health care needs of people in Vietnam, the involvement of the private hospitals in this industry plays an important role, supporting public health facilities in ensuring protect the health of the people. The development of medical examination and treatment services at private hospitals will help people have more choices about the best healthcare services that are suitable depending on the conditions of individuals and families. This study was conducted to examine the relation-
ship between hospital service quality and hospital brand image with patient satisfaction, loyalty, and intention to revisit (Liu et al., 2021; Bentum-Micah et al., 2020; Al-Damen, 2017; Aliman & Mohamad, 2016; Juhana et al., 2015; Nguyen & Nguyen, 2014; Zarei et al., 2015; Zarei et al., 2012; Wu, 2011; Yesilada & Direktör, 2010). Research results showed a direct impact of hospital service quality and hospital brand image on patient satisfaction, loyalty, and revisit intention. These results are suitable with results of some previous studies that supported these relationships, suggesting a key role of hospital service quality in enhancing patient satisfaction (H1) and revisit intention (H2), and the role of hospital brand image in improving patient loyalty (H3). Research results provide practical evidence for the process of building appropriate marketing and public relations strategies to increase competitiveness for private hospitals.

Research results showed that hospital brand image has a direct positive impact on patient loyalty. This finding echoed the previous results about the association between brand image and patient loyalty (Aliman & Mohamad, 2016; Wu, 2011). A positive brand image will make patients have a positive perception and attitude towards the hospital, thereby increasing their loyalty to the hospital. Previous studies have shown that brand image could affect patient loyalty indirectly through patient satisfaction and service quality (Wu, 2011). However, in this study, hospital brand image is not significantly associated with patient satisfaction (H4). This result differed from some previous studies that showed that hospital brand image might be directly or indirectly related to patient satisfaction (Aliman & Mohamad, 2016; Wu, 2011). This can be explained that the hospital brand image only acted as a value of the hospital in the patient’s perception, or, in other words, just an invisible factor that contributes to service quality. For patients, the hospital brand image may be important in deciding to use a service, but it is not an important factor determining their satisfaction. Satisfaction is determined by service quality including equipment, facilities, human resources, transparent and clear service prices, and medical examination and treatment process, which does not come from the brand image.

Several suggestions can be drawn from the study results. Firstly, the hospital brand image acts as a factor that directly affects patient loyalty, leading to the promotion of the patient intention to re-examine. Therefore, in the operational strategy of private hospitals, brand image management should be concentrated and prioritized, especially in building a positive and valuable brand image for patients. Possible measures include online advertising, building good customer relations, or training in branding for key medical staff. In addition, the hospital can deploy special and modern medical services, thereby helping to position the value of the hospital. Second, hospital service quality has an important impact on patient satisfaction and revisit intention, indicating that service quality is a factor that needs attention and improvement in private hospitals. Hospital leaders need to develop customer-oriented health service delivery strategies to help customers have high-quality medical service experiences. These strategies need to be implemented synchronously, systematically, and comprehensively from equipment, facilities, human resources, transparent and clear service prices, and medical examination and treatment processes. These improvements will ensure the sustainability of patient satisfaction and patient loyalty, thereby helping to increase revenue and profit for the hospital.

CONCLUSION AND LIMITATIONS

This study was conducted with the aim to measure the relationship between hospital service quality, hospital brand image, patient satisfaction, patient loyalty and revisit intention of private hospitals in Vietnam. On that basis, the aim is to provide policy implications to create the foundation for marketing and customer care programs of private hospitals in Vietnam towards sustainable business development. The results of the study show that there are 9/10 accepted hypotheses. This study provides practical evidence on the role of hospital service quality and hospital brand image in important outcomes such as patient satisfaction and patient loyalty. Service quality has a direct effect on patient satisfaction and re-
visit intention as the indicator of patient loyalty. Meanwhile, hospital brand image has a direct positive impact on patient loyalty although there is no direct relationship with patient satisfaction.

Any studies have certain limitations and this study is no exception. Firstly, the study was only conducted in private hospitals in urban areas; thus, study results may not be applied to private hospitals in rural areas. Future studies could be conducted in different geographical areas (e.g. rural or mountainous), and different types of health facilities to increase the generalizability. Second, some factors that can affect patient loyalty and patient satisfaction such as trust in the doctor-patient relationship have not been included in this study. Besides, factors such as socio-demographic characteristics and health conditions of patients were not included in the analysis model. Therefore, further studies can use these variables as moderating factors. Third, this study used a cross-sectional survey method at one point in time, while patient satisfaction and patient loyalty are factors that can change over time. Therefore, further longitudinal research should be performed to capture the dynamic characteristics of these two outcomes. Building monitoring systems in private hospitals could be a potential solution in assessing this change.

AUTHOR CONTRIBUTIONS

Conceptualization: Phan Thanh Hai.
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REFERENCES

1. Al-Damen, R. (2017). Health care service quality and its impact on patient satisfaction (case of Al-Bashir Hospital). International Journal of Business and Management, 12(9), 136-152. https://doi.org/10.5539/ijbm.v12n9p136

2. Alhashem, A. M., Alquraini, H., & Chowdhury, R. I. (2011). Factors influencing patient satisfaction in primary healthcare clinics in Kuwait. International Journal of Health Care Quality Assurance, 24(3), 249-262. https://doi.org/10.1108/095268611111116688

3. Aliman, N. K., & Mohamad, W. N. (2016). Linking Service Quality, Patients’ Satisfaction and Behavioral Intentions: An Investigation on Private Healthcare in Malaysia.

4. Ariffin, A. A. M., & Aziz, N. A. (2008). Determining the service quality dimensions and zone of tolerance for hospital services in Malaysia. The business review, Cambridge, 10(2), 164-169.

5. Badri, M. A., Attia, S., & Ustad-i, A. M. (2009). Healthcare quality and moderators of patient satisfaction: testing for causality. International Journal Health Care Quality Assurance, 22(4), 382-410. https://doi.org/10.1108/09526860910964843

6. Bendall-Lyon, D., & Powers, T. L. (2004). The impact of structure and process attributes on satisfaction and behavioral intentions. Journal of Services Marketing, 18(2), 114-121. https://doi.org/10.1108/08876040410964843

7. Bentum-Micah, G., Ma, Z., Wang, W., Atuahene, S. A., & Bondzie-Micah, V. (2020). Perceived Service Quality, a Key to Improved Patient Satisfaction and Loyalty in Healthcare Delivery: The Servqual Dimension Approach. Journal of Health Medical Sciences, 3(2). Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3603338

8. Bittner, M. J. B. S., Gummesson, E., Edvardsson, B., & Gustavsson, B. (1991). Service Quality:
A Multidisciplinary and Multinational Perspective. New York, NY.

9. Boshoff, C., & Gray, B. (2004). The Relationship Between Service Quality, Customer Satisfaction and Buying Intentions in the Private Hospital Industry. South African Journal of Business Management, 35(4), 27-37. http://dx.doi.org/10.4102/sajbm.v35i4.666

10. Boulding, W., Kalra, A., Staelin, R., & Zeithaml, V. A. (1993). A Dynamic Process Model of Service Quality: From Expectations to Behavioral Intentions. Journal of Marketing Research, 30(1), 7-27. https://doi.org/10.2307/3172510

11. Coutinho, E. D., Vieira, P. R. d. C., Mattoso, C. L. d. Q., Troccoli, I. R., & Renni, M. J. P. (2019). Influence of service quality and corporate image on the satisfaction of patients with Brazil's National Cancer Institute. International Journal of Pharmaceutical and Healthcare Marketing, 13(4), 447-468. https://doi.org/10.1108/IJPHM-07-2018-0036

12. Cronin, J. J., Brady, M. K., & Hult, G. T. M. (2000). Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments. Journal of retailing, 76(2), 193-218. https://doi.org/10.1016/S0022-4359(00)00028-2

13. Da Silva, R. V., & Syed Alwi, S. F. (2008). Online corporate brand image, satisfaction and loyalty. Journal of Brand Management, 16(3), 119-144. https://doi.org/10.1057/palgrave.bm.2550137

14. Davies, G., & Chun, R. (2002). Gaps Between the Internal and External Perceptions of the Corporate Brand. Corporate Reputation Review, 5, 144-158. https://doi.org/10.1057/palgrave.crr.1540171

15. Evanschitzky, H., Ramaseshan, B., Woetschläger, D. M., Richelsen, V., Blut, M., & Backhaus, C. (2012). Consequences of customer loyalty to the loyalty program and to the company. Journal of the Academy of Marketing Science, 40(5), 625-638. https://doi.org/10.1007/s11747-011-0272-3

16. Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). Multivariate data analysis (6th ed.). New York: Prentice Hall.

17. Hekkert, K. D., Cihangir, S., Kleefstra, S. M., van den Berg, B., & Kool, R. B. (2009). Patient satisfaction revisited: a multilevel approach. Social Science and Medicine, 69(1), 68-75. https://doi.org/10.1016/j.socscimed.2009.04.016

18. Hoq, M. Z., Amin, M., & Sultana, N. S. (2012). The Effect of Trust, Customer Satisfaction and Image on Customers' Loyalty in Islamic Banking Sector. South Asian Journal of Management. Retrieved from https://www.semantic-scholar.org/paper/The-Effect-of-Trust%2C-Customer-Satisfaction-and-on-Hoq-Sultana/9475cb83625797d5e80fbd9921bf98335353d

19. Juhana, D., Manik, E., Febrinella, C., & Sidharta, I. (2015). Empirical study on patient satisfaction and patient loyalty on public hospital in Bandung, Indonesia. International Journal of Applied Business and Economic Research, 13(6), 4305-4326. Retrieved from https://www.researchgate.net/publication/301689070_Empirical_study_on_patient_satisfaction_and_patient_loyalty_on_public_hospital_in_Bandung_Indonesia

20. Kim, K. H., Kim, K., Kim, D., Kim, J., & Kang, S. (2008a). Brand equity in hospital marketing. Journal of Business Research, 61(1), 75-82. https://doi.org/10.1016/j.jbusres.2006.05.010

21. Kim, Y.-K., Cho, C.-H., Ahn, S.-K., Goh, I.-H., & Kim, H.-J. (2008b). A study on medical services quality and its influence upon value of care and patient satisfaction – Focusing upon outpatients in a large-sized hospital. Total Quality Management & Business Excellence, 19(11), 1155-1171. https://doi.org/10.1080/14783360802323594

22. Liu, C.-H., & Tsai, W.-S. (2010). The effects of service quality and lifestyle on consumer choice of channel types: The health food industry as an example. African Journal of Business Management, 4(6), 1023-1039. Retrieved from https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.855.506&rep=rep1&type=pdf

23. Liu, S., Li, G., Liu, N., & Hongwei, W. (2021). The Impact of Patient Satisfaction on Patient Loyalty with the Mediating Effect of Patient Trust. INQUIRY: The Journal of Health Care Organization, Provision, and Financing. https://doi.org/10.1177/00469580211007221

24. London, J. D. (2013). The promises and perils of hospital autonomy: reform by decree in Vietnam. Social science & medicine, 96, 232-240. https://doi.org/10.1016/j.socsci.2013.07.009

25. Lylte, R. S., & Mokwa, M. P. (1992). Evaluating health care quality: the moderating role of outcomes. Journal of Health Care Marketing, 12(1), 4-14. Retrieved from https://pubmed.ncbi.nlm.nih.gov/10116754/

26. Mei-Liang, C., & Kuang-Jung, C. (2013). The relations of organizational characteristics, customer-oriented behavior and service quality. Global Journal of Business Management, 7(10), 001-016. Retrieved from https://www.internationalscholarsjournals.com/articles/the-relations-of-organizational-characteristics-customer-oriented-behavior-and-service-quality.pdf

27. Mortazavi, S., Kazemi, L., Shirazi, A., & Aziz-Abadi, A. (2009). The relationships between patient satisfaction and loyalty in the private hospital industry. Iranian Journal Public Health, 38(3), 60-69. Retrieved from https://ijph.tums.ac.ir/index.php/ijph/article/view/3172

28. Nguyen, C. N., & Nguyen, T. T. M. (2014). Service Quality and Its Impact on Patient Satisfaction: An Investigation in Vietnamese Public Hospitals. Journal of Emerging Economies and Islamic Research, 2(1), 66-78. https://doi.org/10.24191/jecri.v2i1.9136
29. Nguyen, M. P., & Wilson, A. (2017). How Could Private Healthcare Better Contribute to Healthcare Coverage in Vietnam? International Journal of Health Policy and Management, 6(6), 305-308. https://doi.org/10.15171/ijhpm.2017.05
30. Oliver, R. L. (1999). Whence Consumer Loyalty? Journal of Marketing, 63, 33-44. https://doi.org/10.2307/1252099
31. Parasuraman, A. P., Zeithaml, V., & Berry, L. (1988). SERVQUAL: A multiple-Item Scale for measuring consumer perceptions of service quality. Journal of Retailing, 64(1), 12-40.
32. Peterson, R. A. (1994). A meta-analysis of Cronbach’s coefficient alpha. Journal of consumer research, 21(2), 381-391. https://doi.org/10.1086/209405
33. Roberts, P. W., & Dowling, G. R. (2002). Corporate reputation and sustained superior financial performance. Strategic Management Journal, 23(12), 1077-1093. https://doi.org/10.1002/smj.274
34. Schumacker, R. E., & Lomax, R. G. (2004). A beginner’s guide to structural equation modeling. New York: Psychology press.
35. Sheth, J. N., & Park, C. W. (1974). A theory of multidimensional brand loyalty. In S. Ward, P. Wright & A. Abor (Eds.), NA – Advances in Consumer Research, 01 (pp. 449-459). MI: Association for Consumer Research. Retrieved from https://www.acrwebsite.org/volumes/5729/volumes/v01/NA-01
36. Spire Research & Consulting Pte Ltd. (2020). Healthcare Industry of Vietnam (White paper report). Retrieved from https://www.spireresearch.com/wp-content/uploads/2020/05/White-paper_Healthcare-Industry-of-Vietnam_.pdf.
37. Tran, T., Dung, V., & Neu, I. (2005). Comparative quality of private and public health services in rural Vietnam. Health Policy and Planning, 20(5), 319-327. https://doi.org/10.1093/heapol/czi037
38. Vietnam Ministry of Health. (2019). Report: Summary of Health Performance in 2019 and key tasks and solutions in 2020. Hanoi: Vietnam Ministry of Health.
39. Ware, J. E., Jr., Davies-Avery, A., & Stewart, A. L. (1978). The measurement and meaning of patient satisfaction. Health & medical care review, 1(1), 3-15. Retrieved from https://pubmed.ncbi.nlm.nih.gov/10297474/
40. Wu, C.-C. (2011). The impact of hospital brand image on service quality, patient satisfaction and loyalty. African Journal of Business Management, 5(12), 4873-4882. Retrieved from https://academicjournals.org/article/article1380701699_Wu.pdf
41. Wu, H.-L., Liu, C.-Y., & Hsu, W.-H. (2008). An integrative model of customers’ perceptions of health care services in Taiwan. The Service Industries Journal, 28(9), 1307-1319. https://doi.org/10.1080/02642060802230130
42. Yagci, M. I., Biswas, A., & Dutta, S. (2009). Effects of comparative advertising format on consumer responses: The moderating effects of brand image and attribute relevance. Journal of Business Research, 62(8), 768-774. https://doi.org/10.1016/j.jbusres.2008.03.005
43. Yesilada, E., & Direktör, E. (2010). Health care service quality: A comparison of public and private hospitals. African Journal of Business Management, 4(6), 962-971. Retrieved from https://academicjournals.org/article/article1380721243_Yesilada%20and%20Direkt%C3%B6r%20%20.pdf
44. Zaim, H., Bayyurt, N., & Zaim, S. (2010). Service Quality And Determinants Of Customer Satisfaction In Hospitals: Turkish Experience. The International Business and Economics Research Journal, 9(5), 51-58. https://doi.org/10.19030/iber.v9i5.8145
45. Zarei, A., Arab, M., Froushani, A. R., Rashidian, A., & Ghazi Tabatabaei, S. M. (2012). Service quality of private hospitals: The