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Original Article

The Relationships between Patient Satisfaction and Loyalty in The Private Hospital Industry

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Abstract

Background: In today's competitive world, organizations' survival and success depends on satisfying customer needs and expectations. This is particularly important in health care sector where quality of service and customer relations are the key success factors. The purpose of this research was to determine whether there was a relationship between patient satisfaction and loyalty to the service provider.

Methods: A total of 240 patients in four private hospitals were invited to complete a survey questionnaire. Both parametric and nonparametric research analysis were performed to test the research hypotheses. In addition, sensitivity analysis was applied to identify the most critical satisfaction dimensions that provide the highest return for management effort and financial investment. The study used six specific-satisfaction dimensions, including nursing care, operating room, admission and administrative service, meal, cost and patient room to propose its hypotheses.

Results: The patient overall satisfaction was mostly affected by the nursing care, meal, patient room as well as admission and administrative services, respectively. Further, we found that patient overall satisfaction and loyalty were positively correlated so that one unit increase in patient overall satisfaction increases patient loyalty by 54% to 77%.

Conclusion: Hospitals in devising their long-term strategy should pay sufficient attention to the development of their human resources. Such a strategy should be leveraged on attracting and retaining competent and customer-oriented nursing and administrative staff, investing in continuous professional development of staff and using advanced technologies to improve the quality and speed of customer services.

Keywords: *Health care, Private Hospitals, Patient, Loyalty, Iran*

Introduction

In today's business environment, organization efforts for gaining competitive advantages require continuous planning and monitoring. The heightened intensity of competition in the market where costs associated with unsatisfied customers are high, has led organizations to reorganize and adjust their operations to retain customers and maintain profitability and competitiveness (1-3). Hence, customer satisfaction, as the key factor to drive business strategy and to strengthen competitive position in the marketplace, has become a strategic goal and a yardstick of success for a vast number of organizations.

Customer satisfaction and loyalty have been studied in the management literature, particularly marketing, since 1980s. However, most studies have focused more on products and far less on services with their unique characteristics, including the way they are produced and consumed. Some researchers argue that the inherent nature of services and lack of reliable measurements have caused these concepts to remain underdeveloped in the service literature (4). This is despite the fact that service sector makes up some 70% of total economy in the industrialized world; 2) service quality is considered to be a key competitive advantage in global markets; and 3) there is increasing evidence concerning the positive relationship between customer satisfaction, customer loyalty and organization profitability in service sector.

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In the health care sector, such evidence has been taken seriously, as physicians and hospitals experience growing pressure to increase the quality of their services, enhance the safety of their patients and lower the cost of their care. Thus, health care providers are expected to give greater attention and scrutiny to the accountability function of their patient satisfaction scores, and to ways in which patient satisfaction measurement can be further integrated into an overall measure of clinical quality.
The purpose of this research was to determine whether there was a relationship between patient satisfaction and loyalty to the service provider.

Customer satisfaction and loyalty

Customer satisfaction represents every organization's sole purpose (5), as it is at the heart of every mission statement, and ultimate goal of any strategy. Customer satisfaction is defined as a feeling of pleasure or disappointment resulting from comparing product's perceived performance (or outcome) in relation to his or her expectations (6). Hence, customer satisfaction can be regarded as a mental state which results from the customer's comparison of a) expectations prior to a purchase with b) performance perceptions after a purchase (7-9). A customer may make such comparisons for each part of an offer (specific satisfaction) or for the offer in total (overall satisfaction). Further, service provider characteristics and its organization environment as well as customer wants and how he or she communicates with others may affect satisfaction level.
Customer loyalty, on the other hand, is defined as a deeply held commitment to rebuy or repatronise a preferred product or service consistently in the future, despite situational influences and marketing efforts having the potential to cause switching behavior (10). Three groups of studies reflect both the major approaches to defining and/or customer loyalty and the limitation of these approaches. They are: 1) loyalty as repeat purchase behavior (11), 2) a composite approach of repeat patronage combined with an attitudinal component (12), and 3) a psychological state of loyalty (13). However, each of these approaches face serious shortcomings, particularly in services.
The link between customer satisfaction and loyalty has been extensively researched over the last three decades. Such interest is founded on the assumption that customer satisfaction and loyalty are significant determinants in predicting market share (14, 15) and profitability (16, 17). Following exit-voice theory (18), the satisfaction-loyalty link can be explained by suggesting that the immediate consequences of increased customer satisfaction are decreased customer complaint and increased customer loyalty (19). It is also generally agreed that satisfaction with service quality depends on a large number of tangible and intangible dimensions attributes of the service offer. This makes customer evaluation of service quality, compared to product quality, more varied and significantly more difficult. In response to the growing demands for developing specific and reliable ways to measure quality for more diverse and less tangible services, a number of studies have been conducted. For example, in a seminal study (20), six criteria of good perceived quality was identified: professionalism and skills, attitudes and behavior, accessibility and flexibility, reliability and trustworthiness, recovery, and reputation and credibility. In another major study (21), five key gaps that adversely affect service delivery were identified: 1) research gap, 2) planning and design gap, 3) implementation gap, 4) communication gap, and 5) reality gap. These gaps are basically the difference between customer expectations and perceptions and in practice, it does not matter whether the gap is based on facts or feelings, but how the customer perceives service matters.

Patient care in hospitals

In an increasingly competitive health care market, patient care and satisfaction have become too critical to be left to marketers or operation managers. They are key strategic inputs that have been included in segmentation programs (22) and evaluation of attitudes toward health care systems (23-25). One of the major segments in

health care sector is services provided by hospitals. As a key health care provider, hospitals attract a considerable amount of public resources, private investments, and talented individuals. They in turn attract a lot of good and bad news. It is therefore incumbent on hospital management and marketers to understand how the delivery of quality patient service can positively affect various users of hospital services, their image and profitability (26).

Today, hospitals provide a wide range of services, including room service, nursing service, catering service, and in some cases specialty services, such as wellness and fitness centers, urgent care facilities and childcare. Patient experience of service quality varies across each service a hospital provides. Therefore, a growing body of marketing knowledge specific to hospital services is now available. For example, in a study of 392 patients in two hospitals, it was found that catering, nursing and medical services and discharge processes and procedures had the highest effects on patient satisfaction and it was the overall satisfaction that positively and strongly influence patient loyalty to the health care provider (22). In a similar study (26), it was found that customer satisfaction dimensions of satisfaction with meals, nursing staff and fees all impact positively on both overall satisfaction and loyalty. Finally, data from a stratified sample of 300 patients of emergency room, inpatient and outpatient services revealed that while patient confidence (sense of security, wellbeing and expectations) affects patient satisfaction in all three settings, other service factors, such as treatment quality and physical appearance influence ratings of satisfaction in one or two settings (27). Hence, it is recommended that managers focus on the individual items comprising the factors to generate a checklist of items useful for training as well as managing hospital operations.

Research Model

In most customer satisfaction studies, a distinction has been made between an act or script in a service, a service and overall service (28, 29). Similarly, in hospital settings, how a patient perceives the quality of a service influences his or her evaluation of that particular service and the overall hospital operations. Hence, some research (22, 27) suggest, customer loyalty is a function of specific satisfaction and overall satisfaction (Fig. 1).

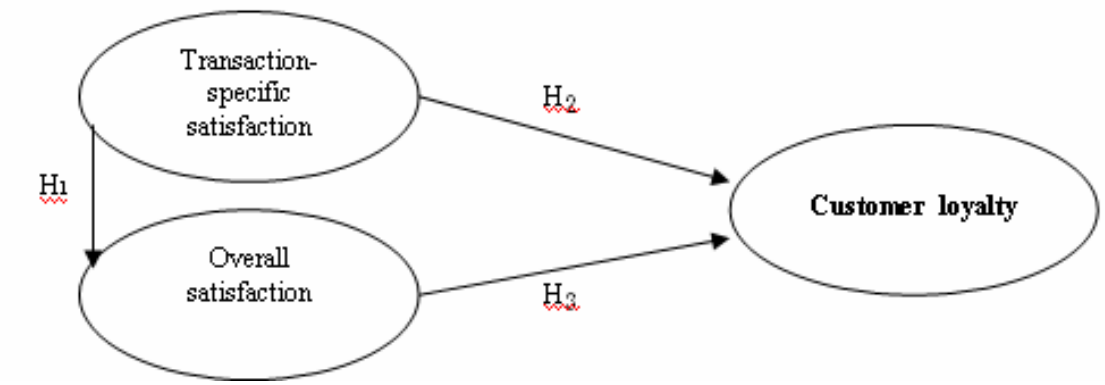

Fig. 1: A satisfaction - loyalty model

An in-dept review of the literature revealed numerous factors that may affect customer satisfaction and loyalty. We identified and pilot-tested six satisfaction factors or services that had been found to have the highest effects on customer overall satisfaction and loyalty in the hospital care research. These services were: 1) nursing, 2) operation room, 3) admission and administration, 4) meal, 5) housekeeping, and 6) expense. Expense is not classified as a service rather

a perception of value for services rendered (27). These factors formed the bases for three research hypotheses in the current study:

H_1: There is a positive and meaningful relationship between patient specific satisfaction dimensions and overall satisfaction with the hospital services.

H_2: There is a positive and meaningful relationship between patient specific satisfaction and loyalty to the hospital.

H_3: There is a positive and meaningful relationship between patient overall satisfaction and loyalty to the hospital.

Materials and Methods

The sample included patients in four private hospitals of similar size, located in Mashhad, Iran. To determine the sample size, 35 patients were selected to participate in a pretest. The test found that the minimum sample size was 240, where z, d and σ^2 were measured 1.96 at 95%, 0.01, and 0.0062, respectively. Hence, 60 respondents from each of the four hospital, denoted here as A, B, C and D, were randomly selected to participate in the study. To qualify to participate in the survey, respondents had to be over age of 20 yr; had to have an operation; and had to have at least one overnight stay in a hospital ward. The data collected in two phases over 20 d period to allow the discharge of one group of patients and the opportunity to sample a wider range of patients. In case some questionnaires were not useable or respondents declined to complete the questionnaire, data from additional patients were collected to reach the designated target number in each hospital.

The questionnaire was based on the work of several major studies (22, 26, 27). Cronbach's alpha was calculated and the result (ra= 0.89) indicated a very good reliability of the instrument. The questionnaire was self-administered and consisted of a cover letter, five questions related to the respondent's age, gender, education level, type of job and salary level, and 25 questions under three major headings (specific satisfaction, overall satisfaction and loyalty) and six sub-headings, representing dimensions of patient satisfaction. To record responses, a five-point Likert scale, ranging from 1= very disagree to 5= very agree, was used.

Data analysis

Both parametric and nonparametric research analysis were performed to test the research hypotheses. First, mean scores were used to rank responses in each satisfaction dimension. Then, the Kruskal-Wallis, Chi Square and the Spearman's Correlation tests were performed to examine the normality assumptions of the sample and the research hypotheses. Finally, multiple regression analyses were run on the data and sensitivity analysis was performed to determine how sensitive the model is to changes in the value of the parameters of the proposed model.

Results

Data were used to rank respondents' satisfaction in each hospital. The Specific Satisfaction (SS) dimensions were: 1) Nursing Care (NUC), 2) Operating Room (OPR), 3) Admission and Administration (ADM), 4) Meals (MEA), 5) Expenses (EXP), and 6) Patient Room (PAR). Table 1 shows the percentage of each satisfaction dimension score in total satisfaction scores among the hospital under investigation are shown .

To test whether there is no difference in mean ranking of specific-satisfaction dimensions in the four hospitals (Ho), the Kruskal-Wallis tests at $\alpha = 0.05$ were performed (Table 2).

Based on the results in Table 2, Ho was rejected. Hence, the data were used to rank and compare specific satisfaction dimensions (Table 3).

To test whether there is no difference in mean ranking of specific-satisfaction dimensions in the four hospital (Ho), the Kruskal-Wallis tests at $\alpha = 0.05$ were performed (Table 4).

Based on the test results, Ho was rejected. Hence, the rank data were used to calculate Spearman's Coefficient for H_1: there is a positive and meaningful relationship between patient specific satisfaction dimensions and overall satisfaction with the hospital services. Table 5 shows *P*-value (p)

and Spearman's Coefficient (ρ) for the six specific-satisfaction dimensions in each hospital.

Similarly, to test H_2: there is a positive and meaningful relationship between patient specific satisfaction and loyalty to the hospital, p-value (p) and Spearman's Coefficient (ρ), were calculated (Table 6).

To test H_3: There is a positive and meaningful relationship between patient overall satisfaction and loyalty to the hospital, the correlation coefficient of patient overall satisfaction (independent variable) and patient loyalty (dependent variable) in each hospital at $\alpha = 0.05$ was calculated (Table 7). The ρ values of 0.778 to 0.882 indicate a relatively high correlation between patients' overall satisfaction and their loyalty to the hospital.

Finally, multiple regression analyses were run to produce regression formulas with the objective of conducting sensitivity analysis and validating the research model. Sensitivity analysis determines how 'sensitive' a model is to changes in the value of the parameters of the model and to changes in the structure of the model (30, 31). It assists managers to focus their attention on the improvement of limited number of variables, not all, to achieve the highest benefit. It is also beneficial in determining the direction of future data collection activities. To do this, regression formulas were produced, where x_1 = satisfaction with nursing services, x_2 = satisfaction with operating room, x_3 = satisfaction with admission and administration, x_4 = satisfaction with meals, x_5 = satisfaction with expenses and x_6 = satisfaction with rooms, y_1 = patient overall satisfaction y_2 = patient loyalty. Table 8 shows regression formulas, input variables and sensitivity coefficient (r^2) for each hospital.

The *P*-values and correlation coefficients in Table 5 were analyzed to test H_1: There was a positive and meaningful relationship between specific-satisfaction and overall satisfaction. We denote Ho when the relationship is not positive and meaningful between each of the six specific-satisfaction dimensions and overall satisfaction and H_1 when the relationship is positive and meaningful (Table 9).

The findings revealed the correlation inconsistency between specific-satisfaction and overall satisfaction across four hospitals. While, hospital C fully supported the first research hypothesis, hospital D supported it in five out of six dimensions, hospital B partially supported it and hospital A basically rejected it, except in one out of six dimensions.

Similarly, the *P*-values and correlation coefficients in Table 6 were analyzed to test H_2: There are a positive and meaningful relationship between patient specific satisfaction and loyalty to the health care provider. We denote Ho when the relationship is not positive and meaningful between each of the six specific-satisfaction dimensions and loyalty and H_1 when the relationship is positive and meaningful. Table 10 shows findings for each of the six specific-satisfaction dimensions

As in previous findings, the second hypothesis was partially supported. This time, while hospital A accepted Ho in most of the sub-hypothesis (five out of six dimensions), hospital C rejected Ho in all six sub-hypothesis, hence lent its strongest support for accepting the hypothesis. Hospital D and B rejected Ho in five and four sub-hypothesis respectively, showing a fair degree of support for the hypothesis.

Furthermore, as the results for ρ values (0.778 to 0.882) and *P*-values (0.000) in Table 7 indicate, the patient overall satisfaction and loyalty to the hospital are positively and meaningfully related. Hence, H_3 is accepted.

Finally, Table 8 shows that x_6, x_1 and x_4 are critical satisfaction dimensions in affecting overall satisfaction and loyalty. Hence, if, for example, x_6 increases by one unit in hospital D, patients' overall satisfaction will increase by 36%. Additionally, one unit increase in overall satisfaction will lead to 54%, 59%, 69% and 77% increase in patients' loyalty in hospital B, D, C and A, respectively.

Table 1: Percentage ranking of specific-satisfaction dimension in each hospital

	NUC	OPR	ADM	MEA	EXP	PAR
A	39	35	34	36	36	38
B	23	26	25	24	16	21
C	18	21	21	21	25	23
D	20	18	20	19	23	18

Table 2: The Kruskal-Wallis Test

SS	χ^2	*P*-value
NUC	85.939	0
OPR	39.384	0
ADM	56.069	0
MEA	59.329	0
EXP	66.991	0
PAR	76.024	0

Table 3: Percentage ranking of specific-satisfaction dimensions in each hospital

	NUC	OPR	ADM	MEA	EXP	PAR
A	21	15	16	15	3	20
B	20	15	19	15	15	16
C	20	18	20	16	9	17
D	19	15	18	15	15	18

Table 4: The Kruskal-Wallis Test

	χ^2	*P*-value
A	35.977	0
B	76.259	0
C	13.417	0
D	17.193	0

Table 5: Testing the relationship between specific and overall satisfaction

	NUC		OPR		ADM		MEA		EXP		PAR	
	ρ	*p*	ρ	*p*	ρ	*p*	ρ	*p*	ρ	*p*	ρ	*p*
A	0.264	0.051	0.079	0.565	0.099	0.471	0.203	0.137	0.188	0.17	0.455	0
B	0.635	0	0.067	0.612	0.21	0.108	0.407	0.01	0.371	0.003	-0.13	0.327
C	0.586	0	0.515	0	0.558	0	0.724	0.001	0	0	0.797	0
D	0.336	0.009	0.374	0.003	0.09	0.374	0.302	0.019	0	0.004	0.572	0

Table 6: Testing the relationship between specific satisfaction and customer loyalty

	NUC		OPR		ADM		MEA		EXP		PAR	
	ρ	*p*	ρ	*p*	ρ	*p*	ρ	*p*	ρ	*p*	ρ	*p*
A	0.47	0	0.216	0.113	0.196	0.151	0.074	0.593	0.134	0.329	0.243	0.074
B	0.093	0.497	0.396	0.002	0.355	0.005	0.394	0.002	0.007	0.958	0.764	0
C	0.688	0	0.612	0	0.601	0	0.473	0	0.483	0	0.488	0
D	0.883	0	0.371	0.004	0.447	0	0.226	0.082	0.315	0.014	0.469	0

Table 7: Correlation coefficient of overall satisfaction and loyalty

	ρ	*P*-value
A	0.778	0
B	0.882	0
C	0.794	0
D	0.84	0

Table 8: Regression Formula, Input Variables and Sensitivity Coefficients

Hypothesis	H	Input Variable	Sensitivity Coefficient (r^2)	Regression Formula
1	A	x_6	0.181	y_1=3.03+0.349 x_6
	B	x_1	0.373	y_1=1.202+0.679 x_1
	C	x_1, x_4, x_6	0.782	y_1= -0.847+0.499 x_6 +0.416 x_4 +0.325 x_1
	D	x_6	0.354	y_1=1.036+0.692 x_6
2	A	x_6	0.2	y_2=3.075+0.351 x_6
	B	x_1	0.541	y_2=0.179+0.893 x_1
	C	x_4, x_6	0.633	y_2=0.547+0.393 x_4 +0.479 x_6
	D	x_1, x_6	0.792	y_2= -0.195+0.767 x_6 +0.266 x_1
3	A	y_1	0.777	y_2=0.789+0.842 y_1
	B	y_1	0.54	y_2=0.607+0.802 y_1
	C	y_1	0.69	y_2=1.128+0.703 y_1
	D	y_1	0.597	y_2=1.216+0.652 y_1

Table 9: Testing the correlation between specific and overall satisfaction

	NUC	OPR	ADM	MEA	EXP	PAR
A	Accept Ho	Accept Ho	Accept Ho	Accept Ho	Accept Ho	Reject Ho
B	Reject Ho	Accept Ho	Accept Ho	Reject Ho	Reject Ho	Accept Ho
C	Reject Ho	Reject Ho	Reject Ho	Reject Ho	Reject Ho	Reject Ho
D	Reject Ho	Reject Ho	Accept Ho	Reject Ho	Reject Ho	Reject Ho

Table 10: Testing the correlation between specific satisfaction and loyalty

	NUC	OPR	ADM	MEA	EXP	PAR
A	Accept Ho	Accept Ho	Accept Ho	Accept Ho	Accept Ho	Reject Ho
B	Reject Ho	Accept Ho	Reject Ho	Reject Ho	Reject Ho	Accept Ho
C	Reject Ho	Reject Ho	Reject Ho	Reject Ho	Reject Ho	Reject Ho
D	Reject Ho	Reject Ho	Accept Ho	Reject Ho	Reject Ho	Reject Ho

Discussion

The tenet of many organizational behavior research is that expanding market share requires strategies to attract new customers and retain the existing customers. The interest in customer retention is rooted in the belief that it is cheaper to keep the existing customers than to recruit the new ones. Hence, the ultimate objective of most improvement efforts in organization, particularly in service sector, is to gain the confidence and loyalty of new and existing customers so that they repeat business or re-patronage. This research revealed that those patients who are more satisfied with their service experiences had a positive propensity toward their hospital and behave loyally accordingly. This finding concurs with attitudinal

loyalty which refers to emotional dependency to a product or a service provider (32). Thus, such emotional dependency provides an opportunity to build and capitalize on the positive image of hospital, and management is responsible to maintain and develop it. Such interpretations guide us to reflect on hospital internal factors that patients regard as satisfaction and loyalty factors.

The results of this research showed that patient satisfaction of nursing services perceived to be the most important among six specific-satisfaction dimensions under investigation. The fact that nursing staff treatment of patients plays such a decisive role in patient satisfaction in hospitals is an indication of the importance of patient-nurse interactions. From a theoretical point of view, as has been argued (33), a nurse may be a hub for patient care rather than a doctor or hospital administrator, where the hub is described as a central checkpoint or coordinating center where people, things and information move. This supports the research hypothesis and highlights the need for hospital staff to be responsive, credible and empathetic when dealing with patients. It seems that nursing staff through their attention to patient needs, genuine interests in their well-being and friendly relationships have long lasting effects on perception of satisfaction and loyalty to the hospital. The sensitivity analysis in our study reconfirmed these findings by suggesting that patient's feeling of 'really and truly being cared for' is first and foremost influenced by courteous and empathetic hospital staff, particularly nursing staff. Patients perceive high quality and just-in-time room and nursing care and meal services as the most critical factor affecting their overall satisfaction level of their hospital stay and hence their loyalty toward it.

Hospitals, as professional service providers, are expected to meet the stringiest standards and ethical codes. They are expected to render their services in a courteous, pleasant and high quality manner. Quality service in hospitals, particularly when operation and/or long-stay is involved, requires both technical expertise and managerial competencies. While it may be the technical expertise that initially influences patients' decision to choose a particular hospital, but beyond and above it how they perceive specific and overall service quality determines their satisfaction and loyalty levels to the hospital. In other words, it is the combined effects of patient satisfaction with the quality of individual hospital service that influences their overall satisfaction and future behavioral decisions as to whether to return to the same hospital or take their business elsewhere. Most research have found that this decision is critical to the hospital management performance and hospital profitability (22, 27, 34).

In conclusion, we recommend that hospital management, when devising long-term mission and strategy, give sufficient attention to the development of their human resources. Such a strategy should be leveraged on attracting and retaining competent and customer-oriented nursing and administrative staff, investing in continuous professional development of human resources and using advanced technologies to improve the quality and speed of admission and administrative services. If this strategy is adopted, it is likely that hospitals attract and retain more customers who also actively engage in informing others of unique characteristics of the hospital and suggesting treatment in the hospital to relatives and friends.

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