



## **The Effect of Service Quality on Patient loyalty: a Study of Private Hospitals in Tehran, Iran**

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**(Received 21 Feb 2012; accepted 19 Aug 2012)**

### **Abstract**

**Background:** Service quality is perceived as an important factor for developing patient's loyalty. The aim of this study was to determine the hospital service quality from the patients' viewpoints and the relative importance of quality dimensions in predicting the patient's loyalty.

**Methods:** A cross-sectional study was conducted in 2010. The study sample was composed of 943 patients selected from eight private general hospitals in Tehran. The survey instrument was a questionnaire included 24 items about the service quality and 3 items about the patient's loyalty. Exploratory factor analysis was employed to extracting the dimensions of service quality. Also, regression analysis was performed to determining the relative importance of the service quality dimensions in predicting the patient's loyalty.

**Result:** The mean score of service quality and patient's loyalty was 3.99 and 4.16 out of 5, respectively. About 29% of the loyalty variance was explained by the service quality dimensions. Four quality dimensions (Costing, Process Quality, Interaction Quality and Environment Quality) were found to be key determinants of the patient's loyalty in the private hospitals of Tehran.

**Conclusion:** The patients' experience in relation to the private hospitals' services has strong impact on the outcome variables like willingness to return to the same hospital and reuse its services or recommend them to others. The relationship between the service quality and patient's loyalty proves the strategic importance of improving the service quality for dragging and retaining patients and expanding the market share.

**Keywords:** Patient's loyalty, Service quality, Private hospitals, SERVPERF, Iran

### **Introduction**

Healthcare is a dynamic and rapidly growing sector of public services market which is currently facing increasing competition and significant changes (1). Competition is particularly unavoidable for private hospitals in a free market economy system (2). Statistics generated by Iranian Ministry of Health shows that, overall, 54 out of 134 private hospitals (i.e. 40%) with approximately 48 percent of the all country's private beds are located in Tehran, the capital (3); stimulating a severe competition among the hospitals in attracting patients. In the highly competitive market,

creating a strong relationship with the customers, which could be consequently followed by their loyalty, is considered to be a key factor for increasing the market share and building a sustainable competitive advantage (4). Loyal customers are argued to be overly crucial for an organization if it is to survive in the market, as attracting new customers is much more expensive than retaining the existing customers (5). As competition grows and given the rising costs of attracting new customers, service providers are

increasingly focusing their strategic activities on customer loyalty (6).

Service quality is perceived as an important factor for building customer loyalty. High quality services can attract new customers, retain the current customers, and even entice competitors' customers (4). Zeithaml et al. have suggested that when service quality assessment is positive, it is the customers' desirable behavioral intentions that strengthen their relationship with the service provider. Saying positive things about the service provider to others, recommending provider or service to others and remaining loyal to the provider are desirable behavioral intentions (7).

There is convincing evidence that when patients receive high-quality services in a hospital, they are more likely to return to the same hospital in the future, say positive things about that to others, and recommend it to their friends and relatives (8). Recommendations from friends, relatives and other patients are stated to be an important source of information for choosing a provider (9). Also, healthcare marketing experts have envisaged positive word-of-mouth by satisfied patients as the most effective advertising method for physicians and hospitals' services (10).

A positive relationship between patients' perception of service quality and loyalty has been to a large degree endorsed by previous studies. Cronin et al. in their study found that there was a relationship between service quality and behavioral intention in six industries including health care services (11). A positive relationship between curing and interpersonal service quality with patient loyalty was confirmed (12).

The aim of this study has been to evaluate the structure of hospital service quality construct from patient's perspective and determine the relative importance of quality dimensions in predicting the patient loyalty.

## Materials and Methods

A cross-sectional study was conducted in the year 2010. The study sample was obtained from all patients hospitalized in the private hospitals of Tehran. In fact, 943 patients were selected from

the eight private general hospitals based on the procedure of proportionality to the size. The inclusion criteria comprised those patients aged 15 years and more who were admitted for at least 24 hours in the hospital and willing to participate in the study. The samples were selected consecutively in each hospital, and the questionnaires were given to them on the day of discharge to fill. The aim of the study was initially explained to the patients, and they were assured of the confidentiality of their information. The illiterate patients were interviewed by a trained interviewer.

The questionnaire contained three parts: the first part included 8 questions related to patients' socio-demographical characteristics. In the second part, the SERVPERF questionnaire was used for evaluation of service quality. This questionnaire is developed based on the same dimensions as the SERVQUAL questionnaire, but measures only the performance of services. Cronin and Taylor have argued that performance-minus-expectations is an inappropriate basis for measuring the quality of services. They introduce the performance-based scale, called SERVPERF, instead which supposedly best suits for measurement of service quality (13). The questionnaire consisted of 22 items constituting five dimensions of service quality. These dimensions along with their range of items include 'Tangibles' (4 items), 'Reliability' (5 items), 'Responsiveness' (4 items), 'Assurance' (4 items) and 'Empathy' (5 items). The researchers added two separate questions to the questionnaire in order to evaluate the impact of health services costs on the customers' perception of service quality. The 'cost' dimension had been integrated in the other dimensions of service quality by previous studies (14-15).

In the third part of the questionnaire, three questions were adopted from Zeithaml et al. study to help measure the loyalty of patients (7). A five-point Likert scale, ranging from 1=strongly disagree to 5=strongly agree, was applied to gauge the patients' perception towards service quality and their loyalty to the hospital.

Data analysis was performed using SPSS 17.0 software. Exploratory factor analysis (EFA) was

employed to establish the factor loadings on the various dimensions of quality (i.e. the association of 24 questions with different dimensions). In this analysis the factors having Eigenvalues equal to or higher than 1 were retained and were selected for interpretation. The items under any factor were kept only if they had a loading above 0.4 and their cross-loading with other factors fell below 0.4. As such, regression analysis assisted with determining the relative importance of the quality dimensions in predicting the patient loyalty. This study was approved by the ethics committee of the Deputy of Research, Tehran University of Medical Sciences (code: 130/1293).

## Results

### *Patients' characteristics*

About 54 % (509) of the patients were women and the rest (46%) men. The average age of the patients was 47.9 years (SD= 17.2). Around 48 % (453) of the patients had higher education and 91 % (863) were with some kind of insurance coverage. In addition, the patients' average length of stay (LOS) was 4.5 days (SD= 4.38). A total of 307 (33%) patients had been previously admitted in the current hospital and 27 % (253) of the patients had used its outpatient services (i.e. imaging, laboratory, clinics and emergency services). Approximately 61.5 % (580) of patients chose the current hospital because of their physician's recommendation.

### *Validity and reliability of survey instrument*

EFA was used to determine the instrument validity (principal components analysis and Varimax rotation method) of the questionnaire. After eliminating 4 items that resulted cross-loadings higher than 0.4 with other factors, four factors were extracted to represent the service quality, explaining 69.5 % of the total variance. All factor loadings in this factor analysis were statistically significant and were higher than the recommended 0.4 level (16). The results of factor analysis specified four dimensions of service quality as follow:

1. Factor one included the items of reliability (1 item), responsiveness (4 items), and assurance (2 items), explaining 23.8 % of the total variance; and was labeled as "Process Quality" (QP).
2. Factor two comprised the items of assurance (2 items) and empathy (5 items), explaining 21.3% of the total variance; labeled as "Interaction Quality" (QI).
3. Factor three encompassed 4 items of tangibles, explaining 15.9% of the total variance; and was named "Environment Quality" (QE).
4. Factor four included 2 items of costs, explaining 8.5% of the total variance; named as "Costing".

Also one factor was extracted for the patient's loyalty which explained 80% of the total variance (Table 1).

Internal consistency analysis was performed for evaluating the reliability of the above-mentioned quality dimensions and patient loyalty. All the Alpha Coefficients are higher than the recommended level (i.e. 0.7), proving the reliability of the survey instrument (16) (Table 1).

### *Descriptive findings*

The mean scores related to 20 items of the service quality ranged from 3.21 for (reasonable hospital costs) to 4.39 for (neat and well-dressed personnel). The highest and lowest mean scores among the four quality dimensions were related to the 'QE' (4.21) and the 'Costing' factors (3.48), respectively. The mean score of patients' perceptions of the service quality was 3.99 out of 5. In addition, the mean scores of loyalty's items ranged from 4.07 for (willingness to reuse the services) to 4.23 for (positive word of mouth). The mean score of loyalty was 4.16 out of 5 (Table 1). Regression analysis was performed for determining the relative importance of the service quality dimensions in predicting the patient loyalty. The purpose of this analysis was to examine the relationship between the dependent (loyalty) and independent variables (i.e. service quality dimensions). According to the results of this model, the adjusted  $R^2$  value was 0.29 and, as such, 29% of the loyalty variance was explained by the service quality

dimensions (Table 2). The regression coefficients showed that the regression model was statistically significant and four independent variables had positively affected the patient's loyalty. In fact, a unit

increase in the 'QP', 'QI', 'QE' and 'Costing' factors can lead to 0.17, 0.15, 0.10 and 0.25 unit increases in the patient's loyalty, respectively.

**Table 1:** Exploratory factor analysis: the dimensions of hospital service quality and patient loyalty

Items/Dimensions	Loading	Mean	SD	Alpha
<b>Process Quality</b>		<b>4.08</b>	<b>0.68</b>	<b>0.93</b>
1. Carrying out the services right at the first time	0.758	4.00	0.84	
2. Providing services at specified time	0.740	4.05	0.80	
3. Error-free and fast retrieval of documents	0.558	4.08	0.80	
4. Telling when services will be performed	0.715	4.13	0.77	
5. Prompt provision of medical and non-medical services	0.743	4.15	0.80	
6. Willingness of personnel to help patients	0.805	4.09	0.84	
7. Personnel immediate presence whenever called	0.803	4.09	0.83	
<b>Interaction Quality</b>		<b>3.93</b>	<b>0.66</b>	
8. Personnel's polite and friendly encounter with patients	0.453	4.42	0.58	
9. Knowledgeable personnel to answer patients' questions	0.586	4.00	0.87	
10. Individual attention to patients	0.586	3.38	1.20	
11. Availability of round-the-clock services	0.673	4.01	0.79	<b>0.90</b>
12. Attention to the patients' beliefs and emotions	0.847	3.94	0.81	
13. Having patients' best interest at heart	0.857	3.88	0.84	
14. Understanding the specific needs of patients	0.822	3.90	0.83	
<b>Environment Quality</b>		<b>4.21</b>	<b>0.59</b>	
15. Neat and well-dressed personnel	0.745	4.39	0.541	
16. Clean and comfortable environment of the hospital	0.816	4.32	0.61	<b>0.86</b>
17. Modern and state-of-the-art equipment	0.703	4.00	0.90	
18. Visual appeal of physical facilities	0.692	4.16	0.75	
<b>Costing</b>		<b>3.48</b>	<b>0.89</b>	
19. Costs versus quality of services	0.830	3.75	0.92	<b>0.72</b>
20. Reasonable hospital costs	0.851	3.21	1.08	
<b>Patient Loyalty</b>		<b>4.16</b>	<b>0.56</b>	
1. Positive word of mouth about hospital	0.90	4.23	0.56	<b>0.87</b>
2. Recommending hospital to others	0.92	4.18	0.60	
3. Willingness to reuse the services of hospital	0.86	4.07	0.72	

**Table 2:** Regression results: the impact of service quality on patient loyalty

Dimensions of service quality	Unstandardized coefficients		Standardized coefficients	t-value	Sig.
	B	SE	Beta		
Constant	2.11	0.118		17.980	0.000
Process Quality	0.143	0.037	0.173	3.861	0.000
Interaction Quality	0.126	0.034	0.149	3.748	0.000
Costing	0.159	0.019	0.252	8.218	0.000
Environment Quality	0.098	0.038	0.103	2.549	0.011

Adjusted  $R^2 = 0.29$ ;  $F = 93.948$ ;  $P < 0.001$

## Discussion

This study provided the opportunity to consider the question that whether the quality perceived by the patients had any influence on their loyalty towards the hospital. Our findings revealed that the patients' experience in relation to the private hospitals' services has strong impact on the outcome variables like willingness to return to the same hospital and reuse its services or recommend them to others.

Result of this study showed that the willingness to communicate positive word-of-mouth, recommend the hospital to others and return to the same hospital, all were affected by the level of improvement in the 'Costing', 'QP', 'QI' and 'QE' dimensions of service quality in the private hospitals. As the cost dimension proved to be the most significant factor in predicting the patient's loyalty, the private hospitals' managers and owners need to pay more attention to setting reasonable prices for the services along with improving quality in their hospital. The costs and prices are very important to those who tend to choose a hospital (14).

In line with previous studies (1, 17-18), the QP dimension also had a noticeable effect on the patient's loyalty. Process of care delivery is argued to be a decisive factor in formation of patients' perception toward the service quality. Patients usually expect timely, convenient, effective and professional services from their hospitals (19). Therefore, hospitals should move toward designing an efficient scheduling system and devoting themselves to provision of impeccable and punctual services.

According to the findings of current study and in line with Boshoff and Gray (20), the QI dimension which is based on the interpersonal relationships had great effect on the patient's loyalty. Prior literature has pointed to the importance and positive effect of the interpersonal relationship dimension of service quality on the patient's loyalty (1, 21). The findings of a study in Greece showed empathy of staff and doctors with mothers in the maternity ward has a strong and significant impact on their

willingness to recommend their hospital to others (22). Lis et al. (23) found that caring for patients as an individual and helping their known about their conditions is influential on their willingness to recommend the medical center to others. Therefore, the physicians/personnel must inform the patients of their illness and conditions, answer their questions, understand and pay attention to their emotional and social needs and be available to them when needed.

'QE' factor was of the least effect on the patient's loyalty compared with the other three dimensions. The little effect of the QE factor on the patient's loyalty, as reported by current research, had been also confirmed by the previous studies (1, 14, 20). Tangibles factor is the easiest dimension (of quality) to control and manage, as human involvement in that is at a minimal level. In recent years, the private hospitals in Tehran paid more attention to the physical and environmental aspects of care delivery (3).

## Limitations

Similar to other studies, this study also has its own limitations. The study's findings are generated from those private hospitals which are located in Tehran; therefore, the generalizability of the results to the other private hospitals of Iran should be done cautiously, even though around 40% of the hospitals are operating in Tehran. Similar studies in other parts of the country might improve the generalizability of this study. Cross-sectional design of the study could be another limitation, as longitudinal studies are assumed to explain and build better causal relationship between the quality and loyalty.

## Conclusion

The relationship between service quality and patient loyalty proves the strategic importance of improving the service quality for dragging and retaining patients and expanding the market share. Four quality dimensions (i.e. Costing, QI, QP and QE) were found to be key determinants of the



patient's loyalty in the private hospitals in Tehran. As this study argues, in the event that the goal of a private hospital is to boost the loyalty of its patients, its quality improvement efforts is advised to mostly focus on the rationalization of costs, timeliness of care delivery, accuracy of performance as well as on enhancing the interpersonal relationships and communication skills of its physicians, nurses and other personnel.

## Ethical considerations

Ethical issues (Including plagiarism, Informed Consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc) have been completely observed by the authors.

## Acknowledgments

This study was a part of a PhD thesis supported financially by Tehran University of Medical Sciences; according to contract number 10477 dated May 23, 2010. We thank the individuals and organizations who participated in our research, specially managers, and other personnel of Atyieh, Kasra, Khatam, Madaen, Pastour, Mehr, Jam and Bahman Hospitals. The authors declare that there is no conflict of interest.

## References

1. Dagger TS, Sweeney JC, Johnson LW(2007). A hierarchical model of health service quality. *J Ser Res-us*,10(2):123-42.
2. Arasli H, Ekiz EH, Katircioglu ST(2008).Gearing service quality into public and private hospitals in small islands: empirical evidence from Cyprus. *Int J Health Care Qual Assur*, 21(1):8-23.
3. Zarei A, Arab M,Rahimi A, Rashidian A, G Tabatabaei M (2012). Service quality of private hospitals: The Iranian Patients' perspective. *BMC Health Serv Res*, 12:31
4. Deng Z, Lu Y, Wei KK, Zhang J(2010).Understanding customer satisfaction and loyalty: An empirical study of mobile instant messages in China. *Int J Inform Manage*, 30(4):289-300.
5. Ramsaran-Fowdar RR (2008). The relative importance of service dimensions in a healthcare setting. *Int J Health Care Qual Assur*, 21(1):104-24.
6. Jones MA, Mothersbaugh DL, Beatty SE (2000). Switching barriers and repurchase intentions in services. *J Retailing*,76(2):259-74.
7. Zeithaml VA, Berry LL, Parasuraman A (1996). The behavioral consequences of service quality. *J Marketing*,60 (2):31-46.
8. Taner T, Antony J(2006). Comparing public and private hospital care service quality in Turkey. *Leadersh Health Serv*, 19(2):1-10.
9. Tung YC, Chang GM (2009). Patient satisfaction with and recommendation of a primary care provider: association of perceived quality and patient education. *Int J Qual Health Care*, 21(3):206-13.
10. Beckham D (2001). 20 years of health care marketing. *Health Forum Journal*, 44(4):37-40.
11. Cronin JJ, Brady MK, Hult GTM (2000). Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments. *J Retailing*,76(2):193-218.
12. Wang HL, Huang JY, Howng SL (2011). The effect on patient loyalty of service quality, patient visit experience and perceived switching costs: lessons from one Taiwan university hospital. *Health Serv Manage Res*, 24 (1):29-36.
13. Cronin JJ, Taylor SA (1992). Measuring service quality: a reexamination and extension. *J Marketing*, 56(3):55-68.
14. Anbori A, Ghani SN, Yadav H, Daher AM, Su TT(2010). Patient satisfaction and loyalty to the private hospitals in Sana'a, Yemen. *Int J Qual Health Care*, 22(4):1-6.
15. Rose RC, Uli J, Abdul M, Ng KL (2004). Hospital service quality: a managerial challenge. *Int J Health Care Qual Assur*,17(3):146-59.
16. Hair JF, Black WC, Babin BJ, Anderson RE (2009). *Multivariate Data Analysis (7th Edition)*. Prentice Hall, New Jersey.
17. Lin H-C, Xirasagar S, Laditka JN (2004). Patient perceptions of service quality in group versus solo practice clinics. *Int J Qual Health Care*,16(6):437-45.

18. Kessler DP, Mylod D (2011). Does patient satisfaction affect patient loyalty? *Int J Qual Health Care*, 24(4):266-73.
19. Choi KS, Lee H, Kim C, Lee S (2005). The service quality dimensions and patient satisfaction relationships in South Korea: comparisons across gender, age and types of service. *J Serv Marketing*, 19(3):140-9.
20. Boshoff C, Gray B (2004). The relationships between service quality, customer satisfaction and buying intentions in the private hospital industry. *S Afr J Bus Manag*, 35(4):27-37.
21. Platonova EA, Kennedy KN, Shewchuk RM (2008). Understanding patient satisfaction, trust, and loyalty to primary care physicians. *Med Care Res Rev*, 65(6):696-712.
22. Chaniotakis IE, Lymperopoulos C (2009). Service quality effect on satisfaction and word of mouth in the health care industry. *Manag Serv Qual*, 19(2):229-42.
23. Lis CG, Rodeghier M, Gupta D (2011). The relationship between perceived service quality and patient willingness to recommend at a national oncology hospital network. *BMC Health Serv Res*, 11(46).

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