



PHYSICAL QUALITY ASSESSMENT IN HEALTHCARE ORGANIZATIONS

Yasin ÇILHORUZ¹

Oğuz IŞIK²

¹Research Assistant, Hacettepe University,
yasincilhoroz@gmail.com

²Assoc. Prof. Dr., Hacettepe University,
oguz.isik@gmail.com

ARTICLE INFO

Key Words: Hospital, Health Services,
Physical Quality

ABSTRACT

Hospitals are health organizations that provide preventive, curative, rehabilitative and health promoting health services. The understanding that the health services offered by hospitals in order to meet the needs of the patients should be consistent with the existing professional knowledge and techniques and to provide the desired outputs has brought the concept of quality in health services to the agenda. There are two approaches about the quality of health care services; technical quality and perceived quality. While technical quality is the ability to present the routine knowledge of health professionals, perceived quality is the general judgment of health care users regarding the excellence of the health service offered. Inasmuch as patients can assess the quality as perceived quality more, this study is designed to allow patients to assess the health care they receive in terms of perceived quality. The objective of this study is to measure the physical qualities of public and private hospitals in Ankara and to evaluate the results a comparative way. The population of this study is composed of patients who visit public and private hospitals operating in Ankara between October 2015 and April 2016.

Easy sampling method was used in the selection of the sample and 557 patients were evaluated by asking questions about the physical characteristics dimension specified in the Servqual Service Quality Scale. As a result of the analysis performed, statistically significant difference was found in all the expressions forming the physical quality dimension of the hospitals according to the properties of the hospitals ($p < 0,05$). According to this, it is found that private hospitals have higher average score than public hospitals have in expressions of the hospitals have technological suitability and modern equipments ($4,07 \pm 1,07$), hospital buildings are visually attractive ($3,95 \pm 1,09$), hospital employees have good and clean appearance ($4,30 \pm 0,99$) and hospital is attractive with additional services as well as basic services offered ($3,89 \pm 1,07$). This result can be explained by the fact that private hospitals are more recent structures, have more modern technology and equipments, they are profit-oriented institutions and therefore pay more attention to physical characteristics, taking into account patients' quality perceptions.

1. INTRODUCTION

Healthcare services are all of the services provided to maintain and improve health; prevent the occurrence of diseases; diagnose and treat the patients at the earliest possible time; prevent injuries; provide medical and social compassionate services to the disabled people and provide people with a qualified, happy and long life. (Tengilimoğlu et al., 2015:72).

Until today, it is possible to allocate the healthcare services to three periods. In the first period, rapid progress was made in medical and medical technology; cost control efforts in healthcare services have

gained importance in the second period. Finally, the third period that we are in can be considered as evaluation and accountability period. (Tomes and Peng, 1995: 25). In this period, healthcare professionals and managers have given more importance to the quality of the services which they provided, because it is necessary to define and measure the perceptions of the quality of the healthcare services that the patients receive and what these perceptions are guided. (Sofaer and Firminger, 2005: 513).

In terms of general terminology, quality is defined as the ability to obtain the desired results using legal means (Donabedian, 1988: 173). Quality in healthcare is the degree to which health services offered to individuals are consistent with current professional knowledge and techniques and provide the desired outcomes (Lohr and Schroeder, 1990: 707; McAlexander et al., 1994: 34). Quality in healthcare can be assessed relying on structure, process, and result. Structural quality refers to the characteristics of the health system; process quality refers to the interactions between health professionals and patients between patients and the results product evidences about changes in the patient's health status. These three dimensions are also important in determining the quality of healthcare services (Schuster et al., 1998: 518).

There are two conceptual dimensions that health service providers need to address regarding quality of healthcare services. These are clinical (technical) quality and perceived quality. Clinical quality is the ability to provide the routine knowledge of health professionals and it is often judged by outcomes (eg, a physician's surgical skill) (Devebakan, 2006: 131). Perceived quality is the general judgment of healthcare users regarding the superiority or excellence of the healthcare service provided and is concerned with both the process and the results. (Zeithaml, 1988: 3). Patients generally assess quality in terms of perceived quality (Zifko- Baliga and Krampf, 1997: 28). This is why perceived quality is a subjective concept (Erdem and Uslu, 2010: 169).

Accordingly, in this study, it has been strived to determine fundamentally how patients perceive the healthcare they receive physically. Moreover, physical quality perceptions of patients and administrators have been compared.

2. METHOD

This study has been conducted to determine the perceptions of hospital administrators and patients who receive healthcare service from the hospitals about the physical qualities of hospitals. The population of this study constitutes public hospitals and private hospitals serving Ankara metropolitan area. The sample selection has not been made in the selection of the hospitals and it has been targeted to reach all the hospitals. As a result, a total of 19 hospitals have been reached. 13 of them are public and rest of these are private. Patients who received services from the internal diseases and general surgery services where the patient intensity is higher, have been included in the scope of the study. In the selection of patients, easy sampling method have been used and patients who had received service from each hospital before and received service again have been included in the study. In addition to the patients, administrators working at various levels to represent their hospitals have been also included in the study. A total of 557 patients and 75 administrators participated in this study.

The physical quality questions of the SERVQUAL Service Quality Scale developed by Parasuraman et al. (1977) and adopted to the healthcare services by Babakuş and Mangold (1992) has been used to determine the physical quality perceptions of the hospitals administrators relating their hospitals as the data collection tool in the study and a questionnaire consisting of 11 questions that consist the physical quality perceptions of the same Scale has been used to determine the physical quality perceptions of the patients .

SPSS (Statistical Package for the Social Sciences) 22.0 have been used in the analysis of the data obtained within the

scope of the study. The significance level (p) in the statistical tests has been accepted as 0.05. The Independent Samples t test (for those with normal distribution).and the Mann-Whitney U test (for those with no normal distribution) have been used in

the comparison of the differences between the two group average scores in the study.

The results of the study are limited to 19 hospitals operating in the metropolitan area of Ankara and can not be generalized to other hospitals.

3.FINDINGS

In this section, the perceptions of patients and hospital managers about the physical quality of the hospitals have been evaluated.

Table 1 contains demographic informations of the patients participating in the study.

Table 1. Demographic Informations of the Patients

Variables	Demographic Features	f	%
Sex	Man	252	45,2
	Women	305	54,8
Marital Status	Married	385	69,1
	Single	172	30,9
Age	≤25	114	20,5
	26-35	163	29,3
	36-45	119	21,4
	≥46	161	28,9
Education	Illeterate	12	2,2
	Literate	14	2,5
	Primary education	129	23,2
	High school	198	35,5
	Undergraduate	174	31,2
	Graduate	30	5,4
Job	Unemployed	69	12,4
	Officer	73	13,1
	Worker	131	23,5
	Housewife	115	20,6
	Retired	59	10,6
	Other	110	19,7
Income	My income is less than my expense	169	30,4
	My income is equal my expense	310	55,8
	My income is more than my expense	77	13,8
Frequency of Receiving Healthcare Services	Never	48	8,6
	At most 1 time per month	362	65
	2 or 3 times per month	99	17,8
	More than 3 times per month	48	8,6
Preferred Healthcare Organization	Family practice	44	7,9
	Public hospital	334	60,2
	University Hospital	60	10,8
	Private Hospital	117	21,1
Have You Ever Received Healthcare Services From Another Hospital?	Yes	476	85,6
	No	80	14,4

According to Table 1, 69.1% of the patients with the majority of women (54.8%) are married. Education status with high school (35.5%) and undergraduate (31.2%) are the majority. When the income status of the patients participating in the study has been examined, it has been found that the patients who their incomes are equal their expenses are majority with 55.8%. 65% of the patients have stated that they go to the hospital at most once per month in terms of the frequency of receiving healthcare services. The majority of the patients (60.2%) have preferred the public hospitals. In addition, 85.6% of the patients have stated that they have also received

services from other health institutions than their own.

Table 2. Distribution of Physical Quality Perceptions of Patients According to Hospital Ownership

Physical Quality Dimension Expressions	Hospital	f	Mean	Std.	t	p
The hospital is equipped with technological and contemporary equipment	Public Hospitals	359	3,284	1,234	-6,870	<0,001
	Private Hospitals	154	4,071	1,079		
The hospital's buildings are visually stunning	Public Hospitals	359	2,744	1,331	-9,928	<0,001
	Private Hospitals	154	3,955	1,099		
The employees of the hospital are clean and good appearance	Public Hospitals	359	3,362	1,254	-8,285	<0,001
	Private Hospitals	154	4,305	0,992		
The service provided by the hospital as well as the additional services offered are also attractive	Public Hospitals	359	2,836	1,302	-8,890	<0,001
	Private Hospitals	154	3,896	1,074		

As shown in Table 2, statistically significant differences ($p < 0,05$) have been found in all the expressions that constituted the physical quality dimension of the hospitals as a result of the analysis. According to this, relating to the expressions that the hospital is equipped with technological and contemporary equipment ($4,07 \pm 1,07$), the hospital's buildings are visually stunning ($3,95 \pm 1,09$), the employees of the hospital are clean and good appearance ($4,30 \pm 0,99$) and the service provided by the hospital as well as the additional services offered are also attractive ($3,89 \pm 1,07$) have been found that private hospitals' average scores are higher than public hospitals.

Table 3. Distribution of Patients' Perceptions of Physical Quality According to Previously Received Healthcare Services from Another Hospital

Physical Quality Dimension Expressions	Have You Ever Received Healthcare Services From Another Hospital?	f	Mean	Std.	t	p
The hospital is equipped with technological and contemporary equipment	Yes	440	3,605	1,193	0,618	<0,001
	No	72	2,986	1,399		
The hospital's buildings are visually stunning	Yes	440	3,150	1,378	0,316	0,71
	No	72	2,833	1,384		
The employees of the hospital are clean and good appearance	Yes	440	3,739	1,195	0,683	<0,001
	No	72	3,056	1,462		
The service provided by the hospital as well as the additional services offered are also attractive	Yes	440	3,182	1,303	0,223	0,186
	No	72	2,958	1,467		

According to Table 3, with reference to whether patients can receive healthcare service before, relating to the expressions that the hospital is equipped with technological and contemporary equipment ($3,60 \pm 1,19$) and the employees of the hospital are clean and good appearance ($3,73 \pm 1,19$) have been found that there has statistically significant difference ($p < 0,05$) between the two groups. The averages of the "Yes" answers given in both expressions are higher than the average of the "No" answers.

Table 4. Distribution of Physical Quality Perceptions of Patients and Administrators by Hospital Ownership

Hospital	Groups	n	Mean	Mean Rank	MWU	p
Public Hospitals	Patient	13	3,037	8,85	24,000	0,002
	Administrator	13	3,885	18,15		
Private Hospitals	Patient	6	3,972	5,67	13,000	0,419
	Administrator	6	4,250	7,33		
All Hospitals	Patient	19	3,332	14,53	86,000	0,006
	Administrator	19	4,00	24,47		

In Table 4, there are findings about physical quality perception scores of patients and administrators. According to the results of the analysis, there has been a statistically significant difference relating to average of the physical quality perception scores of the public hospitals and the average of the physical quality perception scores of all the hospitals by groups ($p < 0,05$). In public hospitals as well as in all hospitals, administrators' averages of the physical quality perception scores are higher than patients' averages of the physical quality perception scores.

Table 5. Physical Quality Evaluations Perceived by Administrators and Patients

Hospitals	Averages of Physical Quality Perception Scores	
	Administrators	Patients
PbH-1	2,75	3,43
PbH-2	4,00	2,62
PbH-3	4,00	3,7,0
PbH-4	3,75	3,10
PbH-5	3,25	2,80
PbH-6	4,00	3,16
PbH-7	4,50	2,74
PbH-8	3,75	2,00
PbH-9	3,25	3,29
PbH-10	3,75	2,72
PbH-11	5,00	2,80
PbH-12	4,00	2,97
PbH-13	4,50	4,15
PH-1	5,00	3,91
PH-2	5,00	4,44
PH-3	4,00	3,73
PH-4	3,25	4,34
PH-5	5,00	4,42
PH-6	3,25	2,99
Public Hospitals	3,88	3,04
Private Hospitals	4,25	3,97
All Hospitals	4,00	3,33

As shown in Table 5, it has been found that while average of the highest physical quality perception scores is 4.25 in private hospitals (PH), this average score in public hospitals (PbH) is 3.88, according to hospital administrators' assessments. Among the public hospitals, average of the highest physical quality perception scores is 5.00 (PbH-11) and the lowest one is 2.75 (PbH-1). Among the private hospitals, PH-1, PH-2 and PH-5 have the highest average scores

(5.00) while PH-4 and PH-6 have the lowest average scores (3.25). According to patients' assessments, the average of the highest physical quality perception scores is 3.97 in private hospitals and this average is 3.04 in public hospitals.

4. DISCUSSION

In this section, the findings obtained from this study have been discussed honestly by taking into consideration the findings of other studies.

In other studies conducted, participants' physical quality perceptions have differed. According to this, in a study conducted by Gürsoy (2013), it has been found that the patients have given the lowest score to the physical quality (tangibles) dimension with an average score of 4.05 in the dimension of 5 service quality (reliability, assurance, responsiveness, tangibles and empathy). In another study, the patients receiving service from a public hospital have given the lowest score to the physical quality dimension with an average score of 3.78 (Yazgan, 2009: 68). In another study conducted by Torun (2009), patients have gave the lowest score to the physical quality dimension with an average score of 4.71. In another study which the scores have been determined as percentage, the physical quality dimension has been scored lowest (10.4%) by patients (Taş, 2009: 105).

In a study conducted by Yörük (2011) in five different hospitals, physical quality dimension of service quality containing dimensions such as medical science services, nursing services, tangibles and accessibility have been found to be ranked as third highest score with an average score

of 3,23. In another study, the physical quality dimension has been found to be ranked as third highest score by patients with an average score of 4.62 (Harput, 2014: 92). Likewise, physical quality dimension has been found to be ranked as third highest score in studies conducted on patients by Pramanik (2016) and Li et all (2005).

In another study conducted by Has (2015), patients have given the second highest score to physical quality (in 5 service quality dimensions) with an average score of 4.64. In another study conducted on patients, it has been found that the average score given to the physical quality has been ranked as second highest score with an average score of 3.74 (Ramanujam, 2011: 193-194).

In another study conducted in India, it has been found that while the patients have ranked as forth highest score to the physical quality dimension with an average score of 1,03 in the dimensions of service quality (reliability, assurance, responsiveness, tangibles, empathy and financial condition) in public hospitals, this average score is 0,66 in private hospitals and has been ranked as sixth highest score with adding accessibility dimension to these dimensions.

5. CONCLUSION

According to the assessments made by both patients and administrators and showing the physical quality perceptions of hospitals, it has been concluded that private hospitals have higher physical quality perception. This result can be explained by the fact that private hospitals are more recent structures, have more modern technology and equipments. Moreover, because they are profit-oriented organizations, taking into account patients' quality perceptions, they pay more attention to physical features of their hospitals. When private and public hospitals have been assessed holistically, it has been found that physical quality perception levels of administrators have been higher than patients as expected. In the emergence of this result, it may have been effective that administrators have

ideas which we may be better by adopting the philosophy of continuous improvement and also patients have low expectations. However, contrary to expected, in PbH-1, PbH-9 and PH-4 hospitals, the perception level of the patients has been higher than the administrators. This result can be explained by the fact that when they see the hospital environment, due to the low expectations of patients they wrap oneself up in high quality perceptions and the administrators have low expectation levels in these hospitals.

Public hospitals can increase the physical quality perceptions of managers and patients positively by having more technological and contemporary equipment, building more visually appealing buildings, employing employees who have cleaner and better appearances and attracting more with the additional services providing as well as core service providing; private hospitals can further their current situation by carrying out these improvements and have more patient admission capacity.

REFERENCES

Devebakan, N. (2006). Sağlık İşletmelerinde Teknik ve Algılanan Kalite. Dokuz Eylül Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 8(1), 120-149.

Donabedian, A. (1988). Quality Assessment and Assurance: Unity of Purpose, Diversity of Means. Inquiry, 25(1), 173-192.

Erdem, Ş., and Uslu, H.N. (2010). Marka Değerinin Marka Genişlemesine Etkisi. Çukurova Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 19(1), 166-184.

Gürsoy, A. (2013). Sağlık Sektöründe Hizmet Kalitesinin Servqual Ölçeğiyle Değerlendirilmesi: Bir Kamu Hastanesi Uygulaması. Yüksek lisan tezi, İstanbul Üniversitesi, İstanbul.

Harput, S. (2014). Yeditepe Üniversitesi Hastanesinde Yatan Hastalarda Beklenen ve Algılanan Hizmet Kalitesinin Servqual Ölçeği ile Değerlendirilmesi. Yüksek Lisan Tezi, Beykent Üniversitesi, İstanbul.

Has, L. (2015). Özel Diş Kliniğine Başvuran Hastalarda Beklenen ve Algılanan Hizmet Kalitesinin Servqual Ölçeği ile Değerlendirilmesine Yönelik Bir Çalışma. Yüksek lisan tezi, İstanbul Arel Üniversitesi, İstanbul.

Li, M., Lowrie, D.B., Huang, C., Lu, X., Zhu, Y., Wu, X., Shayiti, M., Tan, Q., Yang, H., Chen, S., Zhao, P., He, S., Wang, X., and Lu, H. (2015). Evaluating Patients' Perception of Service Quality at Hospitals in Nine Chinese Cities by Use of the Servqual Scale. Asian Pacific Journal of Tropical Biomedicine, 5(6), 497-504.

Lohr, K.N., and Schroeder, S.A. (1990). A Strategy for Quality Assurance in Medicare. New England Journal of Medicine, 322(10), 707-712.

Mahapatra, S. (2013). A Comparative Study of Service Quality Between Private and Public Hospitals: Empirical Evidences from India. Journal of Medical Marketing, 13(2), 115-127.

McAlexander, J.H., Kaldenburg, D.O., and Koenig, H.F. (1994). Service Quality Measurement. Marketing Health Services

14(3), 34.

Pramanik, A. (2016). Patients' Perception of Service Quality of Health Care Services in India: A Comparative Study on Urban and Rural Hospitals. Journal of Health Management, 18(2), 205-217.

Ramanujam, P.G. (2011). Service Quality in Health Care Organisations: A Study of Corporate Hospitals in Hyderabad. Journal of Health Management, 13(2), 177-202.

Schuster, M.A., McGlynn, E.A., and Brook, R.H. (1998). How Good is The Quality of Health Care in the United States?. Milbank Quarterly 76(4), 517-563.

Singh, P. (2013). Comparison of Service Quality Between Private and Public Hospitals: Empirical Evidences from Varanasi District in up. Paradigm, 17(1), 37-46.

Sofaer, S., and Firminger, K. (2005). Patient Perceptions of the Quality of Health Services. Annual Review of Public Health, 26, 513-559.

Taş, D. (2009). Sağlık Hizmet Kalitesinin Ölçümüne İlişkin Bir Uygulama. Yüksek lisans tezi, İstanbul Üniversitesi, İstanbul.

Tengilimoğlu, D., Işık, O., and Akbolat, M. (2015). Sağlık İşletmeleri Yönetimi. Nobel Akademik Yayıncılık Eğitim Danışmanlık: Ankara.

Tomes, A.E., and Peng, S.C. (1995). Service Quality in Hospital Care: The Development of an in-Patient Questionnaire. International Journal of Health Care Quality Assurance, 8(3), 25-33.

Torun, E. (2009). Dr. Sami Ulus Çocuk Hastalıkları Hastanesinde Beklenen ve Algılanan Hizmet Kalitesinin Servqual Ölçeği ile Değerlendirilmesi. Yüksek lisans tezi, Abant İzzet Baysal Üniversitesi, Bolu.

Yazgan, M. (2009). Sağlık İşletmelerinde, Hizmet Kalitesinin Sağlık Hizmeti Sunan ve Sağlık Hizmeti Alan Taraflarca Değerlendirilmesi. Yüksek lisans tezi, Dokuz Eylül Üniversitesi, İzmir.

Yörük, E. (2011). Hastanelerde Hizmet

Kalitesinin Ölçülmesi: Afyonkarahisar İlinde Bir Araştırma. Yüksek lisans tezi, Afyon Kocatepe Üniversitesi, Afyonkarahisar.

Zeithaml, V.A. (1988). Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis Of Evidence. *The Journal of Marketing*, 52(3), 2-22.

Zifko-Baliga, G.M., and Krampf, R.F. (1997). Managing Perceptions of Hospital Quality. *Marketing Health Services*, 17(1), 28-35.