



Perceived Service Quality in Healthcare Organizations and a Research in Ankara by Hospital Type*

Saęlık İřletmelerinde Algılanan Hizmet Kalitesi ve Ankara'da Hastane Türlerine Göre Bir Arařtırma

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Abstract

The purpose of healthcare services is to protect and improve individuals' physical, mental and social health and ensure its continuity to increase the level of welfare and happiness in the society. As in all service organizations, service quality has an important place in healthcare organizations.

Therefore, measuring the impacts of the efforts made by enterprises for service quality and the clients' perceptions of the services provided, assessing how their perceptions differ in different dimensions of quality, and taking new measures according to the results are the key to continuous improvement.

In this study, with respect to the abovementioned issues, perception of the quality of services provided in the field of health by those who receive them is compared according to different types of hospitals providing such service, and evaluations are made accordingly. Thus, whether patients' perceptions of service quality differ according to hospital types, in what dimensions of quality these differences occur and perceived quality by different patient profiles like age, sex, incomes etc. are assessed. In the measurement of service quality, a set of 34 questions with six dimensions was used, which was used by Kara, Tarım and Zaim (2003) in several hospitals and then used in several research studies in Turkey on service quality in healthcare enterprises (Çaha, 2007; Kara, 2006).

Based on the findings of the research, it can be said that public general branch hospitals are perceived as quality at the same level with private hospitals and even they reach higher levels of patient satisfaction. On the other hand, when the sub-dimensions of quality are examined, it is seen that public hospitals are still behind private hospitals in terms of physical quality.

Keywords: Quality, Perceived service quality, Servqual, Servperf, Hospital organizations

Öz

Saęlık hizmetlerinin amacı insanın fiziksel, ruhsal ve sosyal olarak saęlığını koruması, iyileştirilmesi ve bu durumun sürekliliğinin saęlanarak toplumun refah düzeyinin ve mutluluğunun geliştirilmesidir. Bütün hizmet kuruluşlarında olduđu gibi, saęlık kuruluşlarında da hizmet kalitesi önemli yer tutmaktadır.

Bundan dolayıdır ki işletmelerin hizmet kalitesi için ortaya koydukları tüm çabaların yarattıkları etkilerin ölçülmesi, hizmeti alan müşterilerin sunulan hizmetleri nasıl algıladıkları, kalitenin hangi boyutlarında nasıl farklılıklar gösterdikleri ve elde edilen bu sonuçlara göre yeni tedbirlerin alınması sürekli iyileştirmenin anahtarı olmaktadır.

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Yukarıda ele alınan koşullar çerçevesinde bu çalışmada, sağlık alanında sunulan hizmetlerin kalitesinin bu hizmetleri alanlar tarafından nasıl algılandığı, bu hizmetleri sunan farklı hastane türlerine göre karşılaştırılarak değerlendirilmelerde bulunmaktadır. Böylece hastaların hizmet kalite algılarının hastane türlerine göre farklılaşıp farklılaşmadığı, farklılıkların kalitenin hangi boyutları açısından ön plana çıktığı ve yaş, cinsiyet, gelir vb. farklı hasta profillerinin kalite algılarına yöneliktespitler yapılmıştır. Hizmet kalitesinin ölçülmesinde; Kara, Tarım ve Zaim'in (2003) çeşitli hastanelerde kullandıkları ve sonrasında sağlık hizmetlerinde hizmet kalitesiyle ilgili Türkiye'de çeşitli araştırmalarda da kullanılan (Çaha, 2007; Kara, 2006) altı boyuttan oluşan, 34 soruluk anket seti kullanılmıştır.

Araştırma kapsamında elde edilen bulgular sonucunda, özellikle kamu genel dal hastanelerinin, özel hastanelerle aynı düzeyde kaliteli olarak algılandıkları ve hatta hasta tatmini açısından daha yüksek tatmin düzeylerine ulaştıkları söylenebilecektir. Diğer yandan, kalitenin alt boyutları incelendiğinde, fiziksel kalite açısından kamu hastanelerinin hâlâ özel hastanelerin gerisinde kaldığı görülmektedir.

Anahtar sözcükler: Kalite, Algılanan hizmet kalitesi, Servqual, Servperf, Hastane işletmeleri

Introduction

Many factors such as changes in consumer consciousness, spreading social life elements and desire to have a better life etc. increase the importance of healthcare services as well as those provided in other sectors. Patients, who are healthcare services clients, are only satisfied with the services that they perceive as quality. In this study, with respect to the abovementioned issues, how the service quality in health sector is perceived according to different hospital types by those who receive these services is addressed and evaluated accordingly. Thus, the aim is to make a comparative analysis by assessing whether patients' service quality perceptions vary according to hospital types and in which quality dimensions these differences occur.

Literature

There are several organizations in health sector, competition conditions between agencies are getting harder, and organizations fail to meet the client expectations and therefore lose advantage against others (Lim and Tang, 2000). This results in comparing a hospital with other healthcare organizations, which makes even more important such concepts as patient satisfaction and service quality (Paula, Long and Wiener, 2002). Among major research on service quality in literature, Parasuraman, Zeithaml and Berry (1985, 1988, 1991); Oliver and Swan (1989); Carman (1990); Cronin and Taylor (1992, 1994); Taylor and Cronin (1994); Yavaş, Bilgin and Shemwell (1997); Bloemer, Ruyter and Wetzels (1999); Dabholkar, Shepherd and Thorpe (2000); Kanji and Wallace (2000); Caruana, Ewing and Ramaseshan (2000); Lim and Tang (2000); Sivadas and Baker-Prewitt (2000); Yavaş and Shemwell (2001); Andaleeb (2001); Brady and Cronin (2001) and Kara,

Tarım and Zaim (2003) are remarkable. Studies in the field of service quality stated that the patients' opinions receiving service from hospitals on service quality influence hospital incomes (Raju and Lonial, 2002). Similarly, it was found in various studies that service quality is related to enterprise performance (Zeithaml, 1998; Boulding, Kalra, Staelin and Zeithaml, 1993) and client satisfaction (Cronin, Taylor, 1992; Oliver, 1993; Taylor and Baker, 1994).

Service quality perceptions are closely related to the patients' satisfaction level (Varinli, İlkyay and Erdem, 1999; Güllülü, Özer and Candan, 2000; and Williams and Calnan, 1991). Three main opinions were put forward regarding the causality relationship between service quality and patient satisfaction. First, service quality emerged before patient satisfaction (Brady and Cronin, 2002; Parasuraman, Zeithaml and Berry, 1994; Parasuraman et al., 1988; Cronin and Taylor, 1992; and Woodside, Frey and Daly, 1989). Studies arguing that patient satisfaction emerged before service quality (Bitner, 1990; Bolton and Drew, 1994; Bitner and Hubbert, 1994) is the second opinion. The last one asserts that there is no continuous and repeated priority relationship between service quality and satisfaction (Dabholkar, 1995 and McAlexander and Kaldenberg, 1994). Although there is no complete consensus on causality relationship between service quality and satisfaction, it is widely accepted that service quality emerged before satisfaction; i.e., it determines satisfaction level (Dursun and Çerçi, 2004). It is seen that measuring service quality, which plays a significant role in patients' satisfaction level and the hospital success, is important. Another notable service quality dimension measurement is related to the quality: perceived or technical. Clarifying the output that the patient obtains from a healthcare service takes time.

Besides, evaluating the results obtained by the patient can sometimes be difficult and even impossible. The elements that determine patients' service quality perception are indirect criteria such as doctor-patient relationship and/or hospital setting, which remain more outside the scope of the technical dimension (Bowers, Swan and Kohler, 1994; Ettinger, 1998 and Donabedian, 1996).

After 1980, many researchers and academics including Grönroos (1984); Parasuraman et al., (1985); Cronin and Taylor (1992); Mattson (1992), Spreng and Mackoy (1996) and Dabholkar et al., (2000) conducted studies on service quality. Many different methods were introduced for measuring service quality and various studies were conducted by using these methods. Studies made through the service quality method by: (i) Carman (1990) in hospitals and dental clinics; (ii) Babakus and Mangold (1992) and Headley and Miller (1993) in medical services; (iii) Bowers et al., (1994) in military hospitals; (iv) Lytle and Mokwa (1992) in healthcare services; (v) Fusilier and Simpson (1995) in patients with AIDS; (vi) Bebeko and Garg (1995) in nursery services, are examples. Beside these studies, Nyquist and Booms (1987) studied nursery services using another measurement method called Critical Incidents. Among the listed studies, the Servqual Model developed by Parasuraman et al., (1985) was severely criticized despite its widely usage (Lam, 1997) and popularity (Hussey, 1999) (Babakus and Boller, 1992; Carman, 1990; Cronin and Taylor, 1992; Teas, 1993).

The most important criticism was that Servqual's five dimensions lack generalization (Carman, 1990) and thus fail to represent some service sectors (Babakus and Boller, 1992) and the perceived quality should not be measured by expectation and perception differences, but by the service performance. Cronin and Taylor (1992, 1994) suggest that the gap theory is supported by slightly little empirical and theoretical evidence and that it is not appropriate to measure expectations. The fact that patients receiving healthcare service do not have any expectations for the service or do not know what to expect before receiving it is in parallel with the same idea (Fitzpatrick and Hopkins, 1983).

According to Cronin and Taylor (1992, 1994), service performance, by which only performance is measured, has a greater prediction power than service quality in which expectation and perception differences are measured; i.e., performance that is perceived as high means high service quality (Jain and Gupta, 2004). In the service quality mea-

surement, which expectation should be considered is also a matter of discussion. When literature is reviewed, there are studies finding that clients consider two types of expectations, one being desired and the other adequate (Nadiri and Hussain, 2005); clients do not differentiate between different expectation types (Caruana et al., 2000); clients use four different types of expectations: desired, anticipated, deserved, and adequate (Yoon and Ekinci, 2003).

There were many studies for the perceived service quality in healthcare enterprises (Anderson, 1996; Conway and Willcocks, 1997; Mangold and Babakus, 1990; Mowen, Licata and McPhail, 1993; Reidenbach and Sandifer-Smallwood, 1990; Andaleeb, 2000; Lin, Xirasagar and Laditka, 2004; O'Connor, Trinh and Shewchuck, 2000; Lu and Liu 2000; White and BCom, 2000; Clemes, Ozanne and Laurensen, 2001; Lin et al., 2004; Juwaheer and Kassean, 2006) and many studies were made in Turkey (Shemwell and Yavas, 1999; Varinli, İlkay and Erdem, 2001; Çatı, Yılmaz, 2002; Devebakan, Aksaraylı 2003; Yıldız and Erdoğan, 2004; Dursun and Çerçi, 2004; Varinli and Çakır, 2004; Engin and Sevinç, 2005; Devebakan, 2005; Yağcı and Duman, 2006; Zerenler and Öğüt, 2006; Kuşuoğlu, Aslan and İçli, 2006; İzci and Saydan, 2013).

Among these studies, in the study of J. O'Connor et al. in 2000, the perceptions of doctors, health managers, those working for patients, medical and nursery students on patient expectations were attempted to be found. In the empirical study of Carman (2000) where he examined the importance of the features patients use in evaluating quality in hospital services, he suggested the phenomenon of service quality as an attitude. Using the definition of Grönroos (1984), Carman claimed that service quality comprises of two features-functional and technical- and researched the significance of these features on service quality evaluations as well as, if any, their interactions. In the study of Lim and Tang (2000) where the perceived service quality of hospitals were measured, it was found that hospitals did not meet patient expectations in any of the quality dimensions that constitute the Servqual scale (Lim and Tang 2000, pp. 290-299). In the study of Lu and Liu (2000) on Chinese health system, they aimed at adapting Servqual scale to Chinese hospitals.

Syed Saad Andaleeb (2000) conducted a study to compare the service quality of public hospitals with that of private hospitals. With respect to Bangladesh's health system and culture; reactivity, assurance, communication, disci-



pline and tip were taken as quality dimensions (Syed Saad Andaleeb, 2000). The purpose of Clemes et al.'s study made in New Zealand hospitals in 2001 was to determine the dimensions of quality in health sector and assign the relative importance of the dimensions perceived by patients (Clemes et al., 2001). In the article of Lin et al. (2004) that was published to present a conceptual framework (service quality monitoring system) that will help service providers in healthcare enterprises to understand and improve service quality, they focused on measuring the difference between certain gaps just as in Parasuraman et al.'s conceptual service quality model (Lin et al., 2004, pp. 437–445). The study of Juwaheer and Kassean (2006) that was conducted in public hospitals in an African country, Mauritius is one of the recent studies in its field. Although the Servqual model developed by Parasuraman et al. in the field of service quality is applicable in many sectors, Camilleri and O'Callaghan (1998) discussed that a separate theoretical framework should be developed for the health sector. The study of Donabedian (1996) on health sector provides an important basis in this regard. Juwaheer and Kassean's study in 2006 called Healthqual was developed by using the works of Parasuraman (1985) and Donabedian (1996) (Juwaheer and Kassean; 2006, pp.95-96).

Among prominent studies on measuring the quality of healthcare services in Turkey is Shemwell and Yavaş (1999) in which they developed and tested a service quality model. Unlike those developed previously for the measurement of service quality, the model was designed to be used only in the measurement of service quality in hospitals. Another research in this field was made on patients in Erciyes University Research Hospital (Varinli, İlkay and Erdem, 2001, p.105). In the study of Çatı and Yılmaz (2002), indicators that affect quality perception in hospital services were attempted to be found. In another study by Devebakan and Aksaraylı (2003) on 105 patients in a private hospital in Izmir, the relationship between the demographic characteristics of patients and service quality was analyzed. In the study of Yıldız and Erdoğan (2004), service quality was evaluated through a survey with 1100 patients in 31 different hospitals selected from several regions of Turkey; a separate comparison according to hospital types was not included. In their study, Dursun and Çerçi (2004) intended to examine the relationship between the perceived quality of healthcare services, value, patient satisfaction and behavioral intention. In another study on the measurement of patient satisfaction, it was

found that doctors and the appropriateness of their communication substantially influence perceived quality and patient satisfaction (Varinli and Çakır, 2004, p.37).

The issue of what kind of differences there are in quality perceptions according to the types of hospitals providing service has been limitedly researched in studies on quality perception and patient satisfaction in hospital services in Turkey. One of the rare research studies that focus on hospital types is the one by Engin and Sevinç (2005) made on 153 patients in Konya. The researchers conducted a survey with the patients of three official hospitals and one private hospital, but they did not make analysis according to different types of hospitals. Devebakan (2005) found certain results following the research on 290 patients in one private and one university hospital in Izmir by using the Servqual scale, including comparative analyses of the two organizations in terms of different dimensions of the Servqual scale. Another study on patients' perceptions of service quality in consideration of hospital types was conducted by Yağcı and Duman (2006) in public, private and university hospitals in two metropolitan cities in southern Turkey. In the study where questionnaire was administered to 225 patients receiving outpatient clinics service, patients' perceptions of service quality were measured by four dimensions developed. However, the study was only made on patients receiving outpatient clinics service (Yağcı and Duman, 2006, p. 224). The purpose of the study by Zerenler and Öğüt (2006) was to investigate the healthcare service quality perception of those that receive service from hospitals in Konya and the reasons for choosing a given hospital. In their study, Kuşuoğlu et al. (2006) intended to measure service quality in hospitals by using the Servqual scale. İzci and Saydan (2013) investigates the effects of perceived service quality by consumers on their evaluation process and also loyalty behavior. They analyzed the interactions among perceived service quality, customer satisfaction, perceived firm image. A survey was conducted by face-to-face interviews with 274 consumers at Region Hospital.

In several studies, results were found to support the idea that Service Performance (Servperf) is superior to Service Quality (Servqual) in the service quality measurement (Brady et al., 2002; Babakuş and Boller, 1992; Boulding et al., 1993; Cronin and Taylor, 1994 and Oliver, 1993). In these studies, results were found to support the idea that Servperf is superior to Servqual in the measurement of service quality. Additionally, since it was practical and easy-

to-apply to measure only client perceptions, it received more support in different sectors like banking, tourism, health (Babakuş and Boller, 1992; Landrum, Prybutok, Zhang and Peak, 2009; Salazar, Costa and Rita, 2010; Li, 2010; Rodrigues, Barkur, Varambally and Motlag, 2011; Adil and Albkour, 2013). That is, assessing not the expectation-perception difference, but the performance of the service delivered preceded in the measurement of service quality.

Differences in studies conducted in the service quality field generally occur in dimensions and scales used in research. Another study in Turkey that is different in this regard was made by Kara et al. (2003). The distinction of the model presented in the study is that it was developed not statically but dynamically. In the study, a question set that was formed by adding several questions from the scale developed by Cronin and Taylor (1992) for healthcare services into the scale developed previously by Carman (1990) with the same purpose was used. As in previous studies, the model measures expectation, perception and client satisfaction.

When research in Turkey on the measurement of service quality perceptions is reviewed, it is seen that there is limited research on differences in quality perceptions according to hospital types providing the service (Yıldız and Erdoğan, 2004; Engin and Sevinç, 2005; Devedbakan, 2005; Yağcı and Duman, 2006).

Considering the information presented, it is assumed that a comprehensive and comparative study for the perceived service quality according to hospital types will fill an important gap.

Perceived Service Quality and Research in Ankara by Hospital Type

The purpose of this study is to comparatively measure the patients' service quality perceptions receiving service from hospitals and the patient satisfaction; determine whether there is a meaningful difference according to hospital types from which they receive service, if there is any, in which dimensions of quality the difference occurs; and assess the relationship of these differences with patient profiles (Figure 1). The study addresses how patients receiving service from public, private and university hospitals and their relatives perceive such service's quality as a whole, how sub-parameters of quality perceptions differ, and whether these perceptions differ according to various patient profiles. In the measurement of service quality, a set of 34 questions with six dimensions was used, which was formed by adding several questions from the scale developed by Cronin and Taylor (1992) for healthcare services into the scale developed previously by Carman (1990) with the same purpose, and which was used by Kara, Tarım and Zaim (2003) in several hospitals and then used in several research studies in Turkey on service

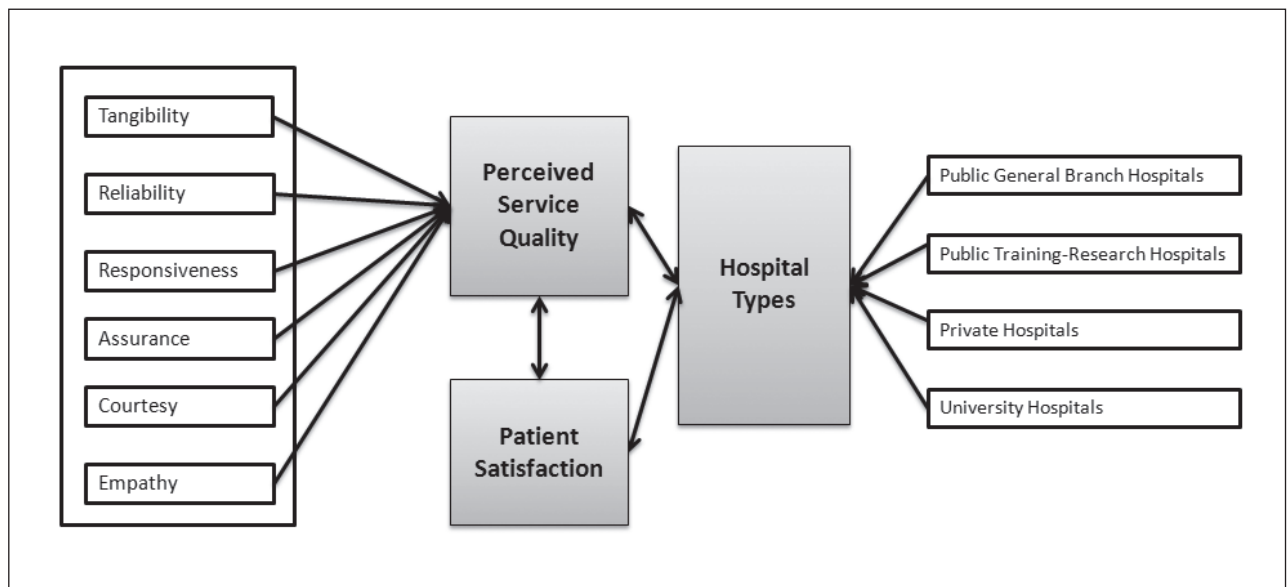


Figure 1. The Service Quality Model, Patient Satisfaction and Organization Types.



quality in healthcare enterprises (Çaha, 2007; Kara, 2006). These assets measure:

- *Tangibles*: Physical facilities, equipment and personnel's image in a hospital,
- *Reliability*: Providing the service properly in a time and manner promised,
- *Responsiveness*: Being willing to assist the patient, and providing the service as soon as possible,
- *Assurance*: Staff having adequate knowledge and building adequate trust in patient,
- *Courtesy*: The degree to which staff are nice to patients,
- *Empathy*: Personnel's putting themselves into the place of patients and understanding their needs.

Three questions that are used in studies on measuring patient satisfaction were also included in the scale:

- Satisfaction 1: patient's desire to revisit the hospital when needed,
- Satisfaction 2: hospital's service quality,
- Satisfaction 3: hospital's overall quality.

Data needed within the scope of this research were obtained through questionnaires administrated to patients randomly selected from those receiving inpatient healthcare services in public general branch, public training-research, private, and university hospitals in Ankara province and so on.

As it is known, Likert scale items can be used with three, five and seven options (Tezbaşaran, 1997). In the study of Karatepe and Avcı (2002), it was stated that it poses difficulty in understanding and responding regarding Turkish respondents when the Likert scale with seven choices is

reviewed. For this reason the scale with five options was preferred. The questionnaire was administrated only in Ankara province taking into consideration of cost and time factors.

Piloting was conducted in Ulus Public Hospital. The questionnaire was administrated to 114 patients, and the scale's validity and reliability was tested by the data collected (Cronbach Alpha; 0.93 and 0.87).

With respect to the classification by the Republic of Turkey Ministry of Health, organizations in the province center that have similar technical infrastructure and facilities were included in the study. Hospitals that offer services in specific branches (oncology, pediatrics, gynecology, physiotherapy etc.), that are located in districts, and that are group C with 75 beds or less and their counterparts were excluded from the study. There are 75 hospital (public, private and university) enterprises and 24 are in Ankara were constituted as basis for the research universe in pursuant of the listed criteria. Estimations on determining the universe and the number of sampling were made considering bed's number in 24 organizations that meet the criterias, as monthly average occupancy and average length of hospital stay. Since the questions were long and took time to respond, only discharged patients were included in the study. The formula developed by Ryan (1995) was used in determining the individual sampling number for each hospital type (Table I).

In the next step, samplings were found according to the proportional volumes estimated by the inpatients numbers for each service type of organizations. As a result of the study 2.287 valid questionnaires were reached. Because of the hospital's intense interest and participation to the study, it was reached more valid questionnaires than sam-

Table I. Estimated Sampling Volumes and Valid Questionnaires Numbers

Organization Type	Monthly Average Inpatients (Groundmass)	Sampling Volumes at a confidence interval of 95%	Valid Questionnaires	% Distributions of Participants by Organization Type
Public Training-Research Hospitals	15.815	376	634	27.7
Public General Branch Hospitals	2.991	341	469	20.5
Private Hospitals	7.843	367	729	31.8
University Hospitals	18.212	377	455	19.1
Total	44.861	1.461	2.287	100.00

plings volumes. The questionnaire was administrated simultaneously in the organizations in May-June, 2011 and the process was conducted by personnel that were involved in quality works. After the data from 2.287 valid questionnaires were entered into SPSS 17.00 program and prepared for analysis, evaluations were made based on descriptive and inferential statistics. Kolmogorov Smirnov and Anova tests were implemented to determine whether the data meet parametric test conditions ($p < 0.05$). As the distribution does not demonstrate homogeneity, non-parametric tests were implemented in the study. In this context, relationship between factors were analyzed with Spearman Correlation test, and relationships between different groups (age, sex, etc.) were analyzed with Mann-Whitney and Kruskal Wallis tests.

Findings

When the respondents' profiles are evaluated regarding hospital types, it is seen that majority of the participants is female and between the age of 26-45. When the participants' educational level is examined, it is seen that most of those receiving service from public, training-research and general branch hospitals are primary- and high-school and its equivalent. The educational level of those receiving service from private hospitals is mostly college and university.

While more than half the questionnaires were responded by the patients in all hospital types, the rate of questionnaires responded by relatives is over 40%. When the length of hospital stay is analyzed, it is seen that while most patients in private hospitals stay in the hospital for 1-3 days. In other hospital types, a great deal of patients, especially including university hospitals receive service for more than 3 days. Most patients in university hospitals (53%) stay for more than 7 days.

The distribution of patients by branch is also different. For instance, while most patients receiving service in pub-

lic general branch and university hospitals are in internal branches, a great majority of the patients in training-research hospitals as well as private hospitals receive service from surgical branches.

As a result of the tests made for the data, it is found that differences in the service quality perceptions of patients according to different hospital types were statistically meaningful ($X^2=11,983$; $p < 0.005$). Mann-Whitney was implemented to test in which hospital types' differences occur and to compare organizations types.

It was seen that differences between hospital types result especially from private and university hospitals, for differences between public general branch hospitals and public training-research hospitals are not statistically meaningful ($u=178,276$; $p > 0.05$). Although general branch hospitals and training-research hospitals affiliated to the Ministry of Health differ in many aspects (such personnel structure, budget, additional payment system, healthcare services' complexity etc.), the result is that the distinction in public hospitals as general branch and training-research can be neglected in the future research.

When differences between organization types regarding perceived service quality is examined, it is seen that services provided in private hospitals and public general branch hospitals are perceived as more quality compared to services provided in other hospital types (Table II). The difference between public general branch hospitals and private hospitals regarding perceived quality is relatively low. Perceived service quality in university hospitals is the lowest compared to other hospital types. It can be concluded that university hospitals' managers should become more attentive to quality activities.

Besides, the patients' satisfaction levels that participated in the study according to different organization types were compared, and whether or not the difference found is

Table II. Perceived Service Quality and the Patient Satisfaction Level by Organization Type

Organization Type	Perceived Service Quality	Patient Satisfaction Level
Public General Branch Hospitals	4.4028	4.3522
Public Training-Research Hospitals	4.2402	4.2021
Private Hospitals	4.4044	4.2928
University Hospitals	4.0455	3.9657
Average	4.2872	4.2144



meaningful was examined. Test results showed that differences between hospital types were statistically meaningful regarding satisfaction level ($X^2=57,040$; $p<0.05$). Mann-Whitney test was implemented in which hospital types the difference occurs and to compare the organizations' types.

When hospital types are compared regarding patients' satisfaction levels, it is seen that while the patients' satisfaction level receiving service from public general branch hospitals are the highest. University hospitals have the lowest level when compared to other organization types. The results obtained by comparing the patients' satisfaction levels show similarity with the perceived quality results.

Differences between hospital types regarding perceived quality were also evaluated in terms of patient profiles. According to the results, females' quality perception was found lower than males, and regarding age groups, that of young people was found lower than elders. This can be interpreted in such a way that females and young people are more selective and careful in their evaluations on service quality.

The patient satisfaction level was also compared according to patient profiles and organization types. According to the results, female patients' satisfaction level was higher than that of males in public general branch hospitals. It was also found that the male and female patients' satisfaction level were equal in public training-research hospitals. The male patients' satisfaction level was found to be higher than that of females in private and university hospitals.

When the satisfaction level in each age group is analyzed, it was found that the more the patients' age increase, the higher the satisfaction level become in university hospitals, which is just the opposite in public general branch hospitals.

According to another result of the study, the patients' quality perception that received service for the first time in hospitals was lower than those that received service from the same hospital before. In public general branch hospitals, this is just the opposite.

When the patient satisfaction levels are compared according to whether they received service from a given hospital before, patients that received service from hospitals before had a higher satisfaction level compared to those that received service for the first time.

In the study, the patients' quality perception was also evaluated in five income groups, the highest is 3.001 Turkish

Liras and more, the lowest is 750 Turkish Liras and less. The patients' quality perception at the highest income group is higher than that of those at other income groups.

When the income groups are analyzed regarding the patient satisfaction level the patients' satisfaction level at the highest income group was found to be higher than other income groups. Furthermore, it was obviously seen that as the patients' monthly income increase, their satisfaction level increases in public general branch hospitals.

When organization types were compared according to the patients' educational level, it was found that those receiving service from public general branch hospitals have the highest satisfaction level and quality perception up to faculty/college graduates. In private hospitals, the highest satisfaction level and quality perception were in patients that had post-graduate education. In university hospitals, as educational level increases, the satisfaction level decreases.

When satisfaction levels are evaluated according to the hospital stay length, the patient satisfaction levels increase in the first place according to the stay length, but then decreases for all organization types. In other words, the patients' satisfaction level decreases according to whether they feel being discharged earlier or later than necessary. The patients' staying length in hospitals where they receive service is for 4-6 days when they have the highest satisfaction level. It is found that the highest patients' quality perception staying in hospitals up to 3 days is in private hospitals. However, as the stay length increases, the quality perception of those receiving from private hospitals decreases. Patients staying in hospitals for more than 4 days perceive the quality at higher levels in public general branch hospitals.

As stated before in many studies, service quality is related to client satisfaction. Similarly, the patients perceptions receiving healthcare service from hospitals for the quality of such service are closely related with their satisfaction levels (Varinli et al., 1999; Güllülü et al. 2000; and Williams and Calnan, 1991).

This study's findings support the research stated above. In the final chapter of the research, correlation tests were implemented to test the relationship between the perceived service quality and patient satisfaction levels. According to the results, there is a high positive correlation between the perceived service quality and patient satisfaction levels ($r=0.702$). Moreover, it is seen that the high positive correlation is statistically meaningful ($p<0.001$). Based on

the results, it can be said that the higher perceived service quality in organizations means the higher patient satisfaction levels.

The positive relationship between the perceived service quality and patient satisfaction was also evaluated in service quality dimensions. The highest correlation level with patient satisfaction was founded in the courtesy dimension ($r=0.656$). Responsiveness ($r=0.623$) and empathy ($r=0.618$) dimensions have the next highest correlation with patient satisfaction levels. Reliability dimension have the lowest correlation with patient satisfaction level ($r=0.511$).

It was examined in the study in which quality dimensions the perceived service quality differ and whether these differences are statistically significant. Test results showed that service quality dimensions demonstrate statistically significant differences according to different organization types ($p<0.05$).

Mann-Whitney test was implemented to test in which organization types the differences occur and to compare dually the organization types. It was found that:

For tangibles dimension, differences between organization types are meaningful for all hospital types. When the each binary comparison results are evaluated, statistically significant results were found ($p<0.05$). For reliability, responsiveness, assurance, courtesy, empathy dimensions, differences between organization types are meaningful ($p<0.05$) for all comparisons between all hospital types except the comparison between public general branch hospitals and public training-research hospitals ($p>0.05$). In conclusion, when all binary comparisons are evaluated, statistically

significant differences were found between public hospitals and private and university hospitals ($p<0.05$).

When differences between organization types are evaluated based on the dimensions, the lowest quality perception in all the organization types is found in the tangibles dimension (Table III). The quality perceptions on tangibles especially in university hospitals and training-research hospitals are lower compared to other organization types. Private hospitals' tangibles are perceived as having the highest quality.

When the intangible quality dimensions are evaluated, it is seen that courtesy and empathy dimensions are perceived as the highest in public and private hospitals. Assurance is perceived as the highest in university hospitals within their organization types. However, the highest quality perception regarding the assurance dimension as well as other intangible dimensions is found in public general branch hospitals compared to other organization types. This is followed by private hospitals in this regard.

Conclusion and Recommendations

Regarding the delivery of healthcare services, there is increasing research on enabling people to benefit from public and private healthcare organizations systematically and unlimitedly, adopting information technologies to the health system, and prioritizing patient safety and satisfaction. From this perspective, regardless of the hospital types, increasing competition conditions and emerging patient-based approaches raise the importance of the quality aspect of delivering healthcare services, or in other words, providing quality healthcare service. The reason behind the increasing importance attached to quality are

Table III. The Service Quality Dimensions Scores by Organization Type

Dimensions	Public General Branch Hospitals	Public Training-Research Hospitals	Private Hospitals	University Hospitals	General Average
Tangibles	4.14	3.84	4.23	3.69	3.97
Reliability	4.42	4.27	4.38	4.10	4.28
Responsiveness	4.43	4.32	4.43	4.05	4.29
Assurance	4.45	4.31	4.43	4.17	4.32
Courtesy	4.48	4.35	4.47	4.13	4.35
Empathy	4.50	4.35	4.48	4.12	4.35



also supported by research in literature (Williams, Calnan, 1991; Cronin and Taylor, 1992; Boulding et al., 1993; Oliver, 1993; Taylor and Baker, 1994; Zeithaml, 1998; Varinli et al., 1999; Güllülü, Özer and Candan, 2000).

In terms of the services delivered in hospitals, of which sub-dimensions the quality perceived by patients will consist an issue that has been comprehensively discussed in literature. Especially following the studies of Parasuraman et al. in 1985 and 1988 on service quality, many research studies were conducted for service quality in hospitals. There is also much research conducted in Turkey in terms of perceived service quality in hospitals. It is seen that the Servqual scale is often used in such studies, and it is also found that there are studies conducted only for the quality measurement. When all the studies are evaluated, it is seen that regardless of the scale used, there is relatively limited research on finding what kind of differences occur according to different hospital types in terms of perceived service quality in healthcare services as well as patient satisfaction (Engin and Sevinç, 2005; Yağcı and Duman, 2006; Yıldız and Erdoğan, 2004). From this point of view, including the increasing importance of perceived service quality in healthcare services, significant results were found as a result of the study that was made comparatively according to the hospital types.

There are various studies that measure perceived service quality and patient satisfaction in public hospitals in Turkey. In some of these studies, a negative perception was found in the services quality provided by public hospitals (Devebakan and Aksaraylı, 2003). However, based on the research findings, it can be said that public general branch hospitals are perceived at the same level quality with private hospitals and even they reach higher patient satisfaction levels. On the other hand, when the quality's sub-dimensions are examined, it is seen that public hospitals are still behind private hospitals in terms of physical quality.

When the practical reasons for the results are examined, the quality works introduced by the Ministry of Health notable. Since 2005, the Ministry of Health has implemented and evaluated the Healthcare Quality Standards (HQS) set that was prepared for evaluating and improving the healthcare services quality in public hospitals.

When the presented framework is evaluated with the study findings, many elements are found for recommendation to hospital managers. To illustrate, when the patients' qual-

ity perception and their satisfaction levels are examined, it can be concluded that managers in university hospitals should be more attentive to quality activities in their hospitals compared to those in other hospital types.

When patient profiles are considered, it can be suggested that especially university hospitals focus on improving quality for the women and young patients. When the patient satisfaction levels are examined, being more attentive to young patients in university hospitals and to elder patients in public general branch hospitals will contribute to satisfaction levels.

When the quality's sub-dimensions are examined, it is found that hospitals managers should prioritize patient-based improvements in the organizations' physical infrastructures.

Regarding the intangible quality dimensions, such as assurance, courtesy, empathy are elements that should be all focused in different manners. When training staff and overall university hospitals' personnel are considered, it is meaningful that patients assurance in physicians and other personnel. However, it can be said that assurance, which is perceived as being higher quality in university hospitals, should be supported by the other quality dimensions such as courtesy and empathy.

When the abovementioned concepts importance for the sector is considered, the research results will shed light on future studies. Differences between different hospital types regarding quality and patient satisfaction, which was evaluated in the study in detail, and the reasons for these differences, will give hints to hospital managers, personnel working in the quality field in hospitals, and academicians, especially including policymakers.

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