

EVALUATION OF EXPECTED AND PERCEIVED SERVICE QUALITY IN HEALTH SERVICES WITH SERVQUAL SCALE

SAĞLIK KURUMLARINDA BEKLENEN VE ALGILANAN HİZMET KALİTESİNİN SERVQUAL ÖLÇEĞİ İLE ANALİZİ

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ABSTRACT

Quality assessment in health institutions is important because it monitors current situation of the institutions and provides guidance to eliminate their deficiencies. This study aims to examine perceived service quality of healthcare recipients and providers from a university hospital. The study is a comparative and descriptive research. Its population is employees and patients of a university hospital in Turkey. The sample size calculated with Gpower program and determined as 257 patients and 161 employees. The data collected from June to September 2019 from the sample group selected by random sampling method. SERVQUAL Scale used as data collection tool. The collected data analyzed using descriptive and inferential statistical methods. Analysis results show the quality of hospital service was evaluated as “low” by healthcare recipients and providers, and the quality perceptions of the providers were lower than those receiving service. Doctors' quality perceptions were higher than other hospital employees. Primary school graduates have lower quality perception than those of other education levels, 18-25 age group has lower perceptions than the other age groups, and married people lower than singles. To improve the service quality in line with the results, studies should be carried out at certain intervals in the hospital.

Keywords: Service Quality, SERVQUAL Scale, Health Care, Service Recipients, Service Providers.

ÖZET

Sağlık kurumlarında kalite değerlendirmesi; ilgili kurumların mevcut durumlarını izlemeleri ve eksikliklerinin giderilmesi adına yol gösterici olması nedeniyle önemlidir. Bu çalışmada, bir üniversite hastanesinden sağlık hizmeti alanların ve sağlık hizmeti sunanların, sağlık hizmetleri sunumuna yönelik algıladıkları hizmet kalitesinin incelenmesi amaçlanmıştır. Çalışma karşılaştırmalı ve tanımlayıcı bir araştırmadır. Araştırmanın evrenini Türkiye’de bir üniversite hastanesinin çalışanları ile bu hastaneden sağlık hizmeti alanlar oluşturmaktadır. Örneklem büyüklüğü, Gpower programı ile hesaplanmış ve 257 hasta ile 161 çalışan olarak belirlenmiştir. Veriler, rastgele örnekleme yöntemi ile seçilen örneklem grubundan Haziran – Eylül 2019 tarihleri arasında toplanmıştır. Veri toplama aracı olarak SERVQUAL Ölçeği kullanılmıştır. Toplanan veriler, betimleyici ve çıkarımsal istatistiksel yöntemler kullanılarak analiz edilmiştir. Analizler sonucunda; sağlık hizmeti sunanlar ve sağlık hizmetini alanlar açısından hastane hizmet kalitesinin “düşük” olarak değerlendirildiği ayrıca hizmet sunanların hizmet alanlara göre kalite algılarının daha düşük olduğu gözlenmiştir. Doktorların kalite algıları diğer hastane çalışanlarına göre daha yüksek bulunmuştur. İlköğretim mezunlarının diğer eğitim düzeyinde olanlara göre, 18 – 25 yaş grubundakilerin diğer yaş gruplarına göre ve bekârların evlilere göre daha düşük kalite algısına sahip oldukları saptanmıştır. Hastanede belirli aralıklarla kalite değerlendirmeleri yapılarak sonuçlar doğrultusunda hizmet kalitesini artırmaya yönelik çalışmalar yapılmalıdır.

Anahtar Kelimeler: Hizmet Kalitesi, SERVQUAL Ölçeği, Sağlık Hizmeti, Hizmet Alanlar, Hizmet Sunanlar.

1. INTRODUCTION

Rapid developments in technology has brought innovations and created a competitive environment. In addition to keeping up with the technological developments, Service sector organizations that want to occupy a position for themselves, in this development and the changing conditions, should also attach importance to quality service delivery (Pakdil et al, 2005). Therefore, the growing interest in the concept of quality also affects the service sector.

The health user, whose knowledge level is increasing each day, is very selective when using health institutions that are vital for them, and this brings an increase in competition among healthcare businesses. Health institutions that want to meet the increasing demands and expectations of the health user must also conduct continuous studies to improve the service quality (Al – Neyadi et al, 2018).

The primary purpose of healthcare enterprises is to meet the patient expectations at the highest level according to the needs of the patient. In order to provide a quality service, the planning should be made in accordance with these needs and expectations. Due to the complex structure in the health sector, the perception level of the consumer is mixed and the perception of each individual differs. Therefore, in order to increase the quality of health services, it is necessary to define the perception level of the health user (Kaya, 2014).

Many of the studies carried out to evaluate the quality of service in health services have been directed towards the service recipients. However, meeting the expectations of healthcare professionals is also very important for service quality. Therefore, this study aims to compare the SERVQUAL scores of health service providers and health service users, of the perceived quality level of the health services. This study differs from other studies in this aspect.

It is envisaged that the results obtained within the scope of the study can be used in studies aimed at increasing the quality level.

2. QUALITY OF SERVICE

Since the concept of service quality does not contain concrete elements, its comprehension, implementation and control is complicated. In addition, while quality in physical goods can be easily defined; The same cannot be said for the concept of service quality. Since "service" is abstract concept, and it is being consumed as soon as it is produced, It is difficult to define service quality due to reasons such as when, by whom and where it is given (Harvey, 1998).

The concept of service quality is generally based on the “the evaluations of the received service by consumers”. Grönroos has defined the service quality as “the expectations of customers about the service they receive and the process of evaluating the service they perceive” (Ataman and Ark, 2011). According to another definition; It was evaluated as “the ability of the company to meet customer expectations at the highest level”. Considering both definitions, it is visible that the main factor that will determine the service quality is “customer expectations”. Every institution providing service must correctly perceive customer expectations and offer its services accordingly (Şahin & Şen, 2017).

Parasuraman, Zeithaml and Berry, who conducted extensive researches on service quality, introduced the following approaches to the evaluation of service quality (Parasuraman et al, 1990):

- Service quality is closely related to how manufacturers and consumers come together.
- Quality of service is the result of whether the consumer re-prefers the manufacturer and the product with the level of satisfaction after the purchase of the service.

According to the evaluations of Parasuraman, Zeithaml and Berry, factors such as the way of presenting the service and the environment in which this presentation is made, redirect their perception of service quality by making a visible impact on individuals.

It is seen that the developments and progresses in service quality increase the preferability level of healthcare providers, increase competitiveness and decrease costs. Therefore, one of the primary objectives of the institutions should be to improve the service quality (Zerenler & Ögüt, 2007). Service quality definitions have created some features related to this concept:

- It is a concept perceived by the customer.
- Service is a concept considered in the production and delivery process.
- It has emerged as a result of interaction of service provider and service recipients.
- Evaluation of service quality is more difficult than other quality evaluations.

Due to being abstract, it is difficult to understand the concept of service quality, therefore, researchers have developed various dimensions to make this concept more understandable. Parasuraman et al. determined ten quality dimensions related to service quality, then tested these ten dimensions and reduced them to five dimensions (physical properties, reliability, responsiveness, assurance and empathy) (Devebakan et al, 2019). These five dimensions also constitute the dimensions of the SERVQUAL Scale used in this study. These dimensions are:

2.1. Physical Properties (Tangibles)

The equipment in the service delivery of any business consists of the appearance of its staff and the physical facilities of the business (Devebakan & Aksaraylı, 2003). For example, if the patient is sent to another hospital for MR imaging in a medical institution, then the physical conditions of this institution are not appropriate (İslamoğlu et al. 2011).

2.2. Reliability

It is the complete presentation of the reliability promised to customers by businesses. The enterprise must fulfill the service it is committed to fulfill in a timely, accurate and complete manner (Devebakan & Aksaraylı, 2003). The correct diagnosis and the implementation of appropriate treatments at the polyclinics can be given as example.

2.3. Responsiveness

The willingness and readiness of the business employee or service provider to help customers includes their willingness to provide the service quickly (Devebakan & Aksaraylı, 2003). The responsiveness dimension emphasizes the speed of dealing with customers' demands, complaints and problems. Responsiveness is also about the flexibility and talent required to provide services tailored to customer needs. This dimension is related to the perceptions of the patients about to what extent the health personnel give themselves to their job while serving the patients and how voluntary they are to help the patients (Rahman, 2007).

2.4. Trust (Assurance)

Employees being kind to customers, avoiding suspicious behaviors in customers, acting in accordance with the confidentiality of personal information and being knowledgeable are the skills that reveal a sense of trust in customers (Devebakan & Aksaraylı, 2003). The fact that employees are knowledgeable and skilled and keep personal information confidential in terms of health services can be included in this dimension (Rahman, 2007).

2.5. Empathy

For the service providers empathy means to be interested in meeting the consumer needs, by imagining themselves under the circumstances that the customers are (Devebakan ve Aksaraylı, 2003). Caring for the customer and providing them with special service, and the business staff's desire to protect customer rights in total means empathy.

Service quality is divided into two; perceived service quality and expected service quality. Perceived service quality; "The customer's judgment after receiving the service" and the expected service

quality is defined as the “expectation of the customer before receiving the service”. The difference between these two determines the level of service quality.

3. HEALTH SERVICES AND QUALITY

Health services, which have an important role in sustaining human life, raising and maintaining the quality of life, show the level of development of countries. The health services is the financing, the procurement processes, and the comprehensive services that need to be analyzed in detail with stakeholders (Thawesaengskulthai et al, 2015).

It is also important how the health care services fulfill their main purpose of "protecting the society health". While protecting the health of the society, it is necessary to treat individuals equally and be equitable, and to provide low-cost and quality health care services that will meet the health expectations of the citizens. Thanks to fulfilling these, it can be said that sufficient efforts have been made to achieve the goals of healthcare services (Demirbilek & Çolak, 2008).

The objectives of health care include all elements that interact directly with service presentation. Each of the above objectives of health care services has been shaped around the main purpose of protecting and improving health at the social level (Yıldırım, 2016).

While the quality of service in healthcare institutions is generally defined as “compliance or perfection of healthcare services to various standards” (Zerenler & Ögüt, 2007), the USA Medical Institute defines this concept as: “The degree to which health services provided to individuals and the community are more likely to achieve desired health outcomes and to be consistent with current professional knowledge (Lhor, 1990). Donabedian considered a quality healthcare service as “the service that maximizes the well-being of the patient after taking into account the expected gains and losses at all stages of the service process” (Donabedian, 1980). Quality product or service must meet expectations and even exceed expectations. As expectations change constantly, quality should be improved continuously (Spath, 2009).

In the report published by the US Institute of Medicine in 2001 (Crossing the Quality Chasm: A New Health System for the 21st Century), it was stated that quality consists of six dimensions (safety, effectiveness, patient-centeredness, efficiency, timely intervention and justice). It is quite difficult to talk about the principles that everyone will accept regarding quality (Maxwell, 1992).

3.1. SERVQUAL Method Used in Service Quality Measurement

SERVQUAL Method is a method that was discovered in the United States between 1983 and 1990 by Parasuraman et al (Park et al, 2018). This method is based on the evaluation of expected and perceived service quality by customers (Sarıkaya, 2004). In other words, it is formed by calculating the difference between the points that customers give to their "expectation-perception" pairs. SERVQUAL is a five-point likert-scale that consists of 44 clauses which is divided in two parts as: the expectation section of five dimensions (Physical Properties, Reliability, Responsiveness, Confidence, Empathy) and 22 clauses, and the perception section of five dimensions (Physical Properties, Reliability, Responsiveness, Confidence, Empathy) and 22 clauses. Using these dimensions, the model identifies the gap between perceived customer's expectation of services and customer actual experience. After identifying the average gap, the service providers try to minimize the gap to improve the service quality (Rahman et al, 2017).

4. MATERIAL AND METHOD

The aim of the study is to determine the difference between the expected and perceived quality levels of the service providers and the service recipients and to make comparisons between the two groups and examine the differences. The study is a descriptive and comparative research.

The universe of the research consists of two groups: the health care service recipients and the health care service providers, at a university hospital. The sample group was composed of patients over 18 years old who had received health services from the related hospital at least once and hospital staff. 1500 staff work in the hospital and an average of 2000 patients visit this institution daily. The sample was determined by random sampling type. The sample size was calculated with the Gpower program and the number of samples was determined as 436, and the scale was applied to 266 patients and 170 employees to adapt the sample to the main mass.

The data was collected at a university hospital in Turkey from June to September 2019 by face to face interviews method. SERVQUAL Scale was used as the data collection tool. SERVQUAL Scale was developed by Parasuraman et al. (1990), Its validity and reliability was performed by Babakus and Mangold in 1992 and it was found to be valid in health institutions (Cronbach's $\alpha = 0.899$) and adapted to Turkish by Birgül (1995) (Cronbach's $\alpha = 0,953$)

In scale evaluation; For each question / proposal, the difference between the score given to the expected service and the score given to the perceived service was obtained and the SERVQUAL Score of the relevant proposition was obtained. Afterwards, the SERVQUAL Scores of the propositions in each dimension were collected, and the SERVQUAL Score of the relevant dimension was obtained by dividing the collected dimensions with the number of items in that dimension. Finally, by collecting the SERVQUAL Score of the five dimensions and dividing it by five, the Average SERVQUAL Score was obtained. When the resulting SERVQUAL Score is positive ($BH > AH$) "high quality", when it is zero ($BH = AH$) it is expressed as "acceptable level" and when it is negative ($AH > BH$) it is expressed as "low quality".

The data obtained were analyzed with SPSS 22.0 package program. In the analysis of the data; Data on demographic information were evaluated by Frequency Analysis. Normality tests have been applied to determine which statistical analysis will be performed on the data (Kolmogorov - Smirnov Test). Parametric methods (Independent Sample T Test, One Way Anova) have been used when the data is normally distributed, while nonparametric methods (Mann Whitney U, Kruskal Wallis H Test) have been used when they are not distributed in a normal pattern.

The fact that the study was conducted in a single university hospital indicates the limitation of the study. Within the scope of the study, an ethics committee permit was obtained from Üsküdar University, and a work permit was obtained from the hospital where the study was conducted and the directorate this hospital was affiliated with.

5. RESULTS

The findings obtained as a result of the analysis of the data obtained with the scale applied to determine the SERVQUAL Scores of the employees and patients of a university hospital and to measure the perceived service quality levels are presented below.

5.1. Analysis of the Patients Related to Scale Scores

Table 1. Frequency Distributions of Patients

<i>Variables</i>		<i>N</i>	<i>%</i>
Profession	<i>Officer</i>	26	10,1
	<i>Housewife</i>	72	28,0
	<i>Worker</i>	79	30,7
	<i>Artisan</i>	18	7,0
	<i>Retired</i>	49	19,1
	<i>Self-Employed</i>	13	5,1
	Total	257	100,0
Gender	<i>Female</i>	115	44,7
	<i>Male</i>	142	55,3
	Total	257	100,0
Marital Status	<i>Single</i>	39	15,2
	<i>Married</i>	218	84,8
	Total	257	100,0
Age	<i>18 – 25 Age</i>	21	8,2
	<i>26 – 40 Age</i>	66	25,7
	<i>41 – 69 Age</i>	170	66,1
	Total	257	100,0
Educational Status	<i>Primary Education</i>	135	52,5
	<i>High School</i>	39	15,2
	<i>Undergraduate</i>	46	17,9
	<i>Middle School</i>	26	10,1
	<i>Associate Degree</i>	11	4,3
	Total	257	100,0
Monthly Income	<i>0 – 3000 TL</i>	172	66,9
	<i>3001 – 4000 TL</i>	54	21,0
	<i>4001 and above</i>	31	12,1
	Total	257	100,0

30% of the participants in the study are workers, 55% are men, 84.8% are married, 66.1% are between 41 and 69 years old, 52% are primary school graduates, and 66.9% are at the income level between 0 and 3000 TL (Table 1).

Table 2. Examination of the Scale Dimension Scores of the Patients by the Marital Status

Dimensions	Variable	n	Rank Avg.	Min – Max	\bar{X}	U	z	p
Physical Properties	Single	39	106,21	-3,00 / 1,00	-0,5897	3362,000	-2,194	0,028
	Married	218	133,08	-3,50 / 1,00	-0,3005			
Reliability	Single	39	107,14	-2,20 / 1,00	-0,4051	3398,500	-2,122	0,034
	Married	218	132,91	-4,00 / 2,00	-0,1312			
Responsiveness	Single	39	99,28	-2,25 / 1,00	-0,3654	3092,000	-2,936	0,003
	Married	218	134,32	-4,00 / 3,00	-0,0608			
Assurance	Single	39	102,97	-2,00 / 1,00	-0,3654	3236,000	-2,592	0,010
	Married	218	133,66	-4,00 / 1,00	-0,0883			
Empathy	Single	39	109,92	-2,20 / 1,00	-0,2872	3507,000	-1,896	0,058
	Married	218	132,41	-4,00 / 2,00	-0,0927			
SERVQUAL Score	Single	39	104,21	-2,12 / 1,00	-0,4026	3284,000	-2,314	0,021
	Married	218	133,44	-3,44 / 1,28	-0,1347			

According to the marital status of the patients, the SERVQUAL Scores were analyzed with the Mann Whitney U test and it was found that the married people scored higher than the singles, this difference was found statistically significant in the sub-dimensions other than the empathy dimension ($p < 0.05$). When the average SERVQUAL Scores were examined for both groups, the service quality they perceived was “low”, but the service quality perceived by the group of singles was lower than the group of the married (Table 2).

Table 3. Examination of the Scale Dimension Scores of the Patients by Age

Dimensions	Variable (Age)	n	Rank Avg.	Sd	Min – Max	\bar{X}	x^2	p	Significant Difference
Physical Properties	1) 18 - 25	21	81,26	2	-3,50/ 0,00	-0,9881	11,234	0,004	(1,2)
	2) 26 - 40	66	126,94	2	-3,00/ 1,00	-0,3523			(1,3)
	3) 41 - 69	170	135,70	2	-3,00/ 1,00	-0,2618			
Reliability	1) 18 - 25	21	75,71	2	-2,20/ 0,20	-0,7238	14,526	0,001	(1,2)
	2) 26 - 40	66	125,70	2	-3,00/ 1,00	-0,2212			(1,3)
	3) 41 - 69	170	136,86	2	-4,00/ 2,00	-0,0859			
Responsiveness	1) 18 - 25	21	75,40	2	-3,00/ 0,50	-0,6429	15,309	0,000	(1,2)
	2) 26 - 40	66	125,39	2	-2,50/ 3,00	-0,1515			(1,3)

	3) 41 - 69	170	137,02	2	-4,00/ 1,00	-0,0235			
Assurance	1) 18 - 25	21	75,07	2	-3,00/ 0,00	-0,7024	15,452	0,000	(1,2)
	2) 26 - 40	66	126,32	2	-2,75/ 1,00	-0,1667			(1,3)
	3) 41 - 69	170	136,70	2	-4,00/ 1,00	-0,0456			
Empathy	1) 18 - 25	21	88,81	2	-3,00/ 0,60	-0,5524	10,123	0,006	(1,3)
	2) 26 - 40	66	122,04	2	-3,00/ 2,00	-0,2061			
	3) 41 - 69	170	136,67	2	-4,00/ 1,00	-0,0365			
Average SERVQUAL Score	1) 18 - 25	21	69,05	2	-2,44/ 0,00	-0,7219	16,155	0,000	(1,2)
	2) 26 - 40	66	128,55	2	-2,12/ 1,28	-0,2195			(1,3)
	3) 41 - 69	170	136,58	2	-3,44/ 1,00	-0,0906			

According to the age status of the patients, the SERVQUAL Scores were analyzed with the Kruskal Wallis H test, and all the scale scores and the Mean SERVQUAL scores were found statistically different ($p < 0.05$). When the SERVQUAL Scores were examined, it was seen that the perceived service quality was “low” for all groups and that the SERVQUAL Scores (of the perceived service quality) of the 18-25 age group were lower than the other groups (Table 3).

Table 4. Examination of the Scale Dimension Scores of the Patients by Educational Status

Dimension s	Variable (Education)	n	Rank Avg.	Sd	Min – Max	\bar{X}	χ^2	p	Significa nt Differen ce
Physical Properties	1)Primary Education	135	113,50	4	-3,00/1,00	0,1556	11,971	0,018	(1,2) (1,5)
	2)Middle School	26	85,27	4	-3,50/1,00	-0,6154			
	3)High School	39	100,54	4	-3,00/1,00	-0,3782			
	4)Associate Degree	11	72,14	4	-1,75/1,00	-0,5682			
	5)Undergraduate	46	109,59	4	-3,00/1,00	-0,6630			
Reliability	1)Primary Education	135	143,94	4	-2,60/1,00	0,0059	15,893	0,003	(1,2) (1,4) (1,5)
	2)Middle School	26	106,38	4	-2,20/1,00	-0,4692			
	3)High School	39	126,71	4	-4,00/2,00	-0,2462			
	4)Associate Degree	11	92,23	4	-1,60/1,00	-0,4545			
	5)Undergraduate	46	108,67	4	-2,40/1,00	-0,4000			

Responsiveness	1)Primary Education	135	142,93	4	-2,00/3,00	0,6667	12,570	0,014	(1,2)
		26	113,87	4	-3,00/1,00	-0,2500			(1,5)
	2)Middle School	39	120,99	4	-4,00/1,00	-0,2436			
	3)High School	11	113,77	4	-1,25/1,00	-0,2500			
	4)Associate Degree	46	107,12	4	-3,50/1,00	-0,3859			
	5)Undergraduate								
Assurance	1)Primary Education	135	142,82	4	-2,50/1,00	0,0407	15,227	0,004	(1,2)
		26	113,69	4	-1,75/1,00	-0,2596			(1,4)
	2)Middle School	39	126,88	4	-4,00/1,00	-0,1859			(1,5)
	3)High School	11	85,82	4	-2,00/1,00	-0,5000			
	4)Associate Degree	46	109,21	4	-3,75/1,00	-0,4239			
	5)Undergraduate								
Empathy	1)Primary Education	135	141,34	4	-2,60/2,00	0,0415	12,412	0,015	(1,5)
		26	116,73	4	-2,00/1,00	-0,2154			
	2)Middle School	39	126,82	4	-3,20/1,00	-0,2000			
	3)High School	11	126,41	4	-1,00/1,00	-0,0909			
	4)Associate Degree	46	102,20	4	-4,00/1,00	-0,4913			
	5)Undergraduate								
Average SERVQUAL Score	Primary Education	135	144,38	4	-2,00/1,28	-0,0001	15,839	0,003	(1,2)
		26	112,42	4	-2,44/1,00	-0,3619			(1,4)
	Middle School	39	120,64	4	-3,44/1,00	-0,2508			(1,5)
	High School	11	97,91	4	-1,15/1,00	-0,3727			
	Associate Degree	46	104,83	4	-3,09/1,00	-0,4728			
	Undergraduate								

According to the educational status of the patients, SERVQUAL Scores were analyzed with the Kruskal Wallis H test and a statistical difference was found between all dimension scores and the Mean SERVQUAL scores ($p < 0.05$). SERVQUAL Scores of primary school graduates were found positive. In other words, the quality of service perceived by primary school graduates is at a "high" level. The SERVQUAL Scores of other education groups were found to be negative, so the perceived service quality was determined "low" (Table 4).

5.2. Analysis of the Employees Related to Scale Scores

Table 5. Frequency distributions of employees

<i>Variables</i>		<i>N</i>	<i>%</i>
Profession	<i>Doctor</i>	10	6,2
	<i>Nurse</i>	32	19,9
	<i>Officer</i>	23	14,3
	<i>Medical Officer</i>	45	28,0
	<i>Intern</i>	28	17,4
	<i>Security</i>	14	8,7
	<i>Cleaning</i>	9	5,6
	Total	161	100,0
Tenure	<i>0 – 5 Year</i>	104	64,6
	<i>6 – 10 Year</i>	29	18,0
	<i>11 – 15 Year</i>	20	12,4
	<i>16 – 20 Year</i>	8	5,0
	Total	161	100,0
Gender	<i>Female</i>	95	59,0
	<i>Male</i>	66	41,0
	Total	161	100,0
Marital Status	<i>Single</i>	75	46,6
	<i>Married</i>	86	53,4
	Total	161	100,0
Age	<i>18 – 25 Age</i>	50	31,1
	<i>26 – 40 Age</i>	79	49,1
	<i>41 – 69 Age</i>	32	19,8
	Total	161	100,0
Educational Status	<i>Primary Education</i>	10	6,2
	<i>High School</i>	46	28,6
	<i>Undergraduate</i>	72	44,7
	<i>Graduate</i>	8	5,0
	<i>Associate Degree</i>	25	15,5
	Total	161	100,0
Monthly Income	<i>0 – 3000 TL</i>	64	39,8
	<i>3001 – 4000 TL</i>	43	26,7
	<i>4001 and above</i>	54	33,5
	Total	161	100,0

28% of the participants in the study were healthcare officers, 64% worked for 0 to 5 years, 59% were women, 53% were married, 49.1% were between 26 and 40 years old, 44.7% of them are graduates with 39.8% of income between 0 and 3000 TL (Table 5).

Table 6. Examination of the Scale Dimension Scores of the Employees by Educational Status

Dimensions	Variable (Education)	n	Min – Max	\bar{X}	ss	f	p	Significant Difference
Physical Properties	1)Primary Education	10	-4,00/-0,25	-2,2250	1,21592	1,837	0,124	
	2)High School	46	-3,00/1,00	-1,2228	0,92980			



	3)Associate Degree	25	-2,75/0,50	-1,2800	0,87297		
		72	-3,50/3,50	-1,4028	1,17152		
	4)Undergraduate	8	-4,00/0,75	-1,4375	1,43147		
	5)Graduate						
Reliability	1)Primary Education	10	-4,00/0,20	-1,8000	1,33998	0,814	0,518
		46	-3,60/0,60	-1,1739	1,07299		
	2)High School						
	3)Associate Degree	25	-3,80/-0,20	-1,4400	0,85245		
		72	-3,50/3,50	-1,3417	1,02225		
	4)Undergraduate	8	-4,00/1,20	-1,2500	1,56662		
	5)Graduate						
Responsiveness	1)Primary Education	10	-4,00/0,00	-1,8750	1,23744	1,940	0,106
		46	-4,00/1,00	-1,0000	1,03010		
	2)High School						
	3)Associate Degree	25	-3,75/0,50	-1,3800	1,06095		
		72	-3,75/1,25	-0,9965	1,06769		
	4)Undergraduate	8	-4,00/0,25	-1,0938	1,43886		
	5)Graduate						
Assurance	1)Primary Education	10	-4,00/-0,25	-2,2250	1,08301	3,118	0,017 (1,2)
		46	-4,00/1,75	-1,0815	1,11934		(1,4)
	2)High School						
	3)Associate Degree	25	-4,00/0,50	-1,5500	1,06800		
		72	-3,75/1,50	-1,1181	1,03118		
	4)Undergraduate	8	-4,00/1,00	-1,4688	1,40431		
	5)Graduate						
Empathy	1)Primary Education	10	-4,00/0,00	-2,0200	1,16790	3,365	0,011 (1,2)
		46	-3,20/1,80	-0,6304	1,04899		(1,4)
	2)High School						
	3)Associate Degree	25	-2,80/0,80	-1,0640	0,98948		
		72	-3,60/1,20	-0,8389	1,13219		
	4)Undergraduate	8	-4,00/1,20	-0,8500	1,63445		
	5)Graduate						
Average SERVQUAL Score	1)Primary Education	10	-4,00/-0,16	-2,0290	1,08495	2,511	0,044 (1,4)
		46	-3,31/0,35	-1,0217	0,89702		
	2)High School						
	3)Associate Degree	25	-3,00/0,06	-1,3428	0,81431		
		72	-3,53/1,73	-1,1396	0,95381		
	4)Undergraduate	8	-4,00/0,60	-1,2200	1,42079		
	5)Graduate						



SERVQUAL Scores of the employees were tested with One Way Variance Analysis according to their educational status. Statistical differences were found in Average SERVQUAL scores and in sub-dimensions other than Physical Properties, Reliability and Responsiveness ($p < 0.05$). The perceived service quality for all groups was found to be “low”. Additionally, the average SERVQUAL scores of primary school graduates were found to be lower than other groups (Table 6).

Table 7. Examining the Scale Dimension Scores of the Employees by the Professional Status

Dimensions	Variable (Profession)	n	Min – Max	\bar{X}	ss	f	p	Significant Difference
Physical Properties	1) Doctor	10	-2,00/3,50	-0,5750	1,61181	5,977	0,000	(7,1)
	2)Nurse	32	-4,00/1,00	-1,6406	1,17593			(7,3)
								(7,5)
	3)Officer	23	-3,00/0,00	-1,2935	0,87468			(7,6)
	4)Medical Officer	45	-3,25/0,75	-1,6111	0,90854			
		28	-2,75/0,50	-0,9286	0,73867			
	5)Intern	14	-2,25/0,50	-0,8750	0,92897			
	6)Security	9	-4,00/0,00	-2,6944	1,08813			
	7)Cleaning							
Reliability	1) Doctor	10	-2,00/1,20	-0,5800	0,96356	3,862	0,001	(7,1)
	2)Nurse	32	-4,00/1,20	-1,3812	1,20682			(7,4)
								(7,6)
	3)Officer	23	-3,00/0,20	-1,2348	0,82606			
	4)Medical Officer	45	-3,60/0,00	-1,6800	0,90494			
		28	-3,80/0,20	-1,0857	1,02910			
	5)Intern	14	-2,40/0,60	-0,7714	0,85883			
	6)Security	9	-4,00/0,00	-2,1556	1,32958			
	7)Cleaning							
Responsiveness	1) Doctor	10	-2,00/1,25	-0,2500	0,84984	2,873	0,011	(7,1)
	2)Nurse	32	-4,00/1,00	-1,0156	1,06812			
	3)Officer	23	-3,25/0,00	-1,2717	0,97092			
	4)Medical Officer	45	-4,00/0,50	-1,2722	0,98688			
		28	-3,75/0,75	-1,0446	1,26391			
	5)Intern	14	-2,25/0,50	-0,7500	0,90935			
	6)Security	9	-4,00/0,00	-2,0556	1,33918			
	7)Cleaning							
	1) Doctor	10	-1,75/1,50	-0,3750	0,94465	4,116	0,001	(7,1)
								(7,2)
	2)Nurse	32	-4,00/1,75	-1,1094	1,17593			(7,5)
								(7,6)

Assurance	3)Officer	23	-3,75/0,00	-1,4783	1,14295			
	4)Medical Officer	45	-4,00/0,75	-1,3889	0,91632			
	5)Intern	28	-4,00/0,50	-1,0893	1,17893			
	6)Security	14	-2,00/0,00	-0,9821	0,71026			
	7)Cleaning	9	-4,00/0,00	-1,2609	1,13039			
	1) Doctor	10	-2,20/1,20	-0,4000	1,12349	3,361	0,004	(7,1) (7,2) (7,4) (7,6)
Empathy	2)Nurse	32	-4,00/1,20	-0,7063	1,30506			
	3)Officer	23	-3,60/0,40	-1,1652	1,15782			
	4)Medical Officer	45	-3,20/1,20	-0,8533	0,93167			
	5)Intern	28	-3,00/0,40	-0,9571	1,01450			
	6)Security	14	-2,00/1,80	-0,3429	0,98739			
	7)Cleaning	9	-4,00/0,20	-2,1778	1,36910			
Average SERVQUAL Score	1) Doctor	10	-1,79/1,73	-0,4360	0,99105	4,501	0,000	(7,1) (7,2) (7,5) (7,6)
	2)Nurse	32	-4,00/0,60	-1,1706	1,04440			
	3)Officer	23	-3,19/0,00	-1,2887	0,86867			
	4)Medical Officer	45	-3,31/0,06	-1,3611	0,80083			
	5)Intern	28	-3,00/0,29	-1,0211	0,92961			
	6)Security	14	-2,05/0,35	-0,7443	0,73543			
	7)Cleaning	9	-4,00/-0,13	-2,3278	1,13185			

SERVQUAL Scores of the employees were tested with One Way Variance Analysis according to their professional status, and statistical difference has been detected between the groups ($p < 0.05$). It was observed that the perceived quality of service was low in all groups. It was observed that the average SERVQUAL scores of the doctors were higher than the other groups, namely, the level of service quality perceived was higher than the other groups, while the average SERVQUAL scores of the cleaning staff were observed to be at the lowest level compared to the others (Table 7).

5.3. Analysis of Differences in Terms of Scale Scores of the Employees and Patients

Table 8. Examining the Scale Dimension Scores of Employees and Patients

Dimensions	Employment Status	n	Rank Avg.	Min – Max	\bar{X}	U	z	p
Physical Properties	Employee	161	139,93	-4,00/3,50	-1,0922	9487,500	-9,485	0,000
	Patient	257	253,08	-3,50/1,00	-0,3444			



Reliability	Employee	161	131,91	-4,00/1,20	-1,3329	8196,500	-10,616	0,000
	Patient	257	258,11	-4,00/2,00	-0,1728			
Responsiveness	Employee	161	139,48	-4,00/1,25	-1,1165	9414,500	-9,637	0,000
	Patient	257	253,37	4,00/3,00	-0,1070			
Assurance	Employee	161	131,14	-4,00/1,75	-1,2609	8073,000	-10,814	0,000
	Patient	257	258,59	-4,00/1,00	-0,1304			
Empathy	Employee	161	154,68	-4,00/1,80	-0,8882	11862,500	-7,565	0,000
	Patient	257	243,84	-4,00/2,00	-0,1222			
Average SERVQUAL Score	Employee	161	131,33	-4,00/1,73	-1,1967	8102,500	-10,533	0,000
	Patient	257	258,47	-3,44/1,28	-0,1753			

SERVQUAL Scores of the employees and patients were analyzed with the Mann Whitney U Test; It was found that there was a statistically significant difference between their subscale scores and the Average SERVQUAL scores ($p < 0.05$). Perceived service quality differs between employees and patients. It was observed that the SERVQUAL Scores of both groups were negative, that is, the service quality they perceived was low, and that SERVQUAL scores the employees were lower than the patients'. In other words, the service quality perceived by the employees was found lower than the patients (Table 8).

6. DISCUSSION AND CONCLUSION

The service sector is developing and changing rapidly in nowadays conditions. This development and change affects the health sector, which is in the service sector. Therefore it requires organizations, that want to find a place in a competitive environment, provide quality services. When the written works are considering, it is seen that the perceived service quality is generally examined at the service recipients (external customers) and the perceived service quality studies for the service providers (internal customers) are few. In addition, no study was found that compares the perception of service quality perceived by employees and patients. Therefore, there are two features that distinguish this study from others. The first is that there has been no study on the quality of service in the mentioned university hospital in the past. The second is the comparison in terms of service recipients and service providers. Both service providers and service recipients were included in the study, the resulting data were evaluated according to socio-demographic characteristics and the results were compared with other studies in the literature.

In the study conducted by Al Borie and Damanhour (2013) in a private health institution, as a result of the SERVQUAL Scale applied on the patients, it was determined that the perceived service quality differed according to demographic data, the service quality was observed to be low for all groups, and the perceived service quality decreased further as the level of education increased.

In the studies conducted by Lowrie et al. in 2015 and Aghamolaei et al. in 2014, it was concluded that the service quality did not differ according to the demographic characteristics by using SERVQUAL Scale, and the perceived quality was low for all groups.

In this study, the level of service quality perceived by married and single individuals was found to be "low", but it was found that the SERVQUAL scores of married people were higher than single ones. Similarly, in the study conducted by Harput (2014) in a university hospital, a difference was found between the service quality levels, and it was determined that the singles had a lower quality perception than the married people. The reason for the difference between the groups may be that the quality threshold and expectations of the singles are higher than the married people.

When the service quality levels perceived by the patients according to their age status were analyzed, the service quality perceptions of all groups were determined as “low”. However, the service quality perception of the 18-25 age group was observed to be lower than the other groups. In the study conducted by Apay and Arslan (2009) in a university hospital, it was also observed that the young age group had a lower perception of quality compared to other groups. As the reasons for the difference between their perceptions of quality it is thought that, young people use technology more today, they can reach everything they want more easily while older patients are thought to be more satisfactory due to the difficulties they encountered until that age.

The level of service quality perceived by patients was varied according to the educational status variable, the service quality perceived by primary school graduates was high, and the quality perceived by other groups was found to be low. In the study carried out by Al-Borie and Damanhour (2013) in a private health institution, the quality of service varied according to the education level, and it was found that the perceived service quality decreased as the level of education increased. The reason for the difference between the groups may be the low level of knowledge and expectations of the group with low education level.

There was a difference between the service quality levels perceived by the employees according to their educational status, and it was observed that the perceived service quality was low for all groups. It has been determined that undergraduate and graduate graduates have higher perceptions of quality compared to other groups and primary school graduates have lower perceptions quality than other groups. In the study performed by Şen (2010) in a hospital, there was no difference between perceived service quality levels. It can be considered as the reason for the difference between the groups that the primary and lower graduates are generally composed of cleaning staff and reflected their feelings about the institution they work in while filling the scale.

When the perceptions of service quality according to the professional status of the employees are examined; differences were detected between the groups, the peception of service quality of all groups was found low, but it was understood that the doctors had a higher quality perception than the other groups. All professional groups in the relevant hospital found the quality of service provided to be insufficient. In the study of Yardan and Arslan (2014) on health workers, the perceived service quality levels were determined to be various. It is thought that the high level of consciousness of physicians together with the vocational education they receive is effective in the higher perceived service quality levels compared to other groups.

When the findings are analyzed in general, in this study, it is seen that primary school graduate hospital employees have a lower perception of quality compared to other education groups, and 18-25 age group hospital employees have a lower perception than other age groups and single people have a lower perception of quality than married people.

Service recipients and service providers rated perceived service quality as “low”; however, the quality perception of the service providers was found to be lower than the service users. Because the employees better know the institution they serve, their negative feelings about the institution they work with, having a communication problem with their managers and creating a negative impression of the busy working environment may have caused them to perceive quality of service as low.

It is recommended that the managers take remedial initiatives for the five quality dimensions within the scope of the research, the quality team of the hospital regularly measure service quality, monitor the changes that occur, and perform causality studies on the factors affecting the quality dimensions in other studies to be conducted.

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