



# The Measurement of Outpatient Satisfaction in a Training and Research Hospital

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## ABSTRACT

**Introduction:** One of the important goals of quality in healthcare service is to ensure patient satisfaction. The objective of this study is to assess the satisfaction levels of patients receiving treatment at the outpatient clinics of a training and research hospital.

**Patients and Methods:** The study was conducted in a cross-sectional and descriptive design. The survey method, comprising questions determined by the researchers through a comprehensive review of the literature, was employed. The reliability of the survey items was assessed using Cronbach's alpha. The calculated Cronbach's alpha value was 0.936, indicating the high reliability of the survey instrument.

**Results:** In the study, the majority of participants were male, accounting for 52.4% of the total sample. Additionally, a large proportion of participants (51%) were under the age of 40. Regarding educational background, the highest percentage of participants (44.5%) had completed primary education. The level of satisfaction with medical services was high ( $4.24 \pm 0.91$ ), nursing services received a high level of satisfaction ( $4.13 \pm 1.05$ ), laboratory services were also highly rated for satisfaction ( $4.15 \pm 1.05$ ), radiology services were associated with a high level of satisfaction ( $4.16 \pm 1.00$ ), and participants expressed a high level of satisfaction with other services ( $3.83 \pm 1.02$ ). There were no significant differences in patient satisfaction scores based on gender and age. However, a significant difference was observed in patient satisfaction scores based on education status.

**Conclusion:** The study revealed that patients admitted to the training and research hospital reported high levels of satisfaction. Specifically, the highest level of satisfaction was observed with medical services, while the lowest level of satisfaction was reported with other services.

**Key Words:** Patient satisfaction; quality of healthcare; health services, outpatient

## Bir Eğitim ve Araştırma Hastanesinde Ayaktan Başvuran Hasta Memnuniyetinin Ölçülmesi

### ÖZET

**Giriş:** Sağlık hizmetlerinde kalitenin önemli hedeflerinden biri hasta memnuniyetinin sağlanmasıdır. Bu çalışmanın amacı, bir eğitim ve araştırma hastanesinin polikliniklerine başvuran ve tedavi gören hastaların memnuniyetlerini belirlemektir.

**Hastalar ve Yöntem:** Araştırma kesitsel ve tanımlayıcı tipte dizayn edilmiştir. Araştırmada araştırmacılar tarafından literatür taranarak belirlenen sorulardan oluşan anket yöntemi kullanılmıştır. Ankette kullanılan maddelerin güvenilirliği için *Cronbach Alpha* kullanılmıştır. Güvenilirlik sonucu *Cronbach Alpha* 0.936 olarak bulunmuş ve yüksek düzey güvenilirlikte kabul edilmiştir.

**Bulgular:** Araştırmaya katılanların çoğu erkek (%52.4), 40 yaş altı (%51) ve ilköğretim mezunudur (%44.5). Hekimlik hizmetlerinden memnuniyet yüksek seviyede ( $4.24 \pm 0.91$ ), hemşirelik hizmetlerinden memnuniyet yüksek seviyede ( $4.13 \pm 1.05$ ), laboratuvar hizmetlerinden memnuniyet yüksek seviyede ( $4.15 \pm 1.05$ ), radyoloji hizmetlerinden memnuniyet yüksek seviyede ( $4.16 \pm 1.00$ ), diğer hizmetlerden memnuniyet yüksek seviyede ( $3.83 \pm 1.02$ ) olarak bulunmuştur. Hasta memnuniyetleri puanlarına göre cinsiyet ve yaş açısından anlamlı farklılık bulunmaz iken öğrenim durumuna göre anlamlı farklılık bulunmuştur.

**Sonuç:** Eğitim ve araştırma hastanesine ayaktan başvuran hastaların memnuniyetlerinin yüksek seviyede olduğu bulunmuştur. En yüksek memnuniyetin hekimlik hizmetlerinden olduğu en düşük memnuniyetin diğer hizmetlerden olduğu bulunmuştur.

**Anahtar Kelimeler:** Hasta memnuniyeti; sağlık hizmetinin kalitesi; sağlık hizmetleri; ayaktan başvuran hasta

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## INTRODUCTION

Quality can be defined as the successful fulfillment of the needs and expectations of patients<sup>(1)</sup>. Satisfaction, on the other hand, is the subjective experience of patients resulting from the fulfillment of their needs and expectations<sup>(2)</sup>. A common aspect highlighted in the definitions of quality is the significance of considering the expectations of those receiving services. Patients and their relatives play a pivotal role as the primary stakeholders in determining the quality of healthcare services provided by hospitals.

One of the important parameters and indicators of healthcare quality is patient satisfaction<sup>(3-5)</sup>.

Correct identification, accurate diagnosis, appropriate treatment, competent health professionals, cleanliness of facilities, respectful, attentive, friendly employees, and timely services are among the expectations of patients in patient satisfaction studies<sup>(6)</sup>.

Satisfaction can be defined as the expectations of a product or service and the experiences gained as a result of using the product or receiving the service meet the expectations<sup>(7)</sup>. In general, patient satisfaction is based on the satisfaction of expectations of health services provided to patients and patients' perceptions of the health services provided<sup>(8,9)</sup>.

Patient satisfaction is a term that originates from the difference between the patient's expectations and the service received<sup>(10)</sup>. Patient satisfaction is the results obtained as a consequence of comparing the expectations and benefits in all processes aimed at meeting the need, starting from the need for healthcare<sup>(11)</sup>.

The concept of patient satisfaction first emerged in the 1960s, and since then, there has been a significant increase in studies focusing on enhancing patient satisfaction, recognizing its importance. In today's healthcare sector, patient satisfaction has gained paramount significance due to the escalating competition and the growing demand for high-quality healthcare services<sup>(11)</sup>.

Considering its significance, patient satisfaction is a matter that healthcare institutions should prioritize and allocate time for. In an increasingly competitive environment, healthcare organizations need to continuously enhance patient satisfaction in order to cater to a larger patient population<sup>(12)</sup>.

When discussing the factors that influence patient satisfaction, several aspects can be considered, including effective communication and information provision to patients, the physical infrastructure and environmental conditions of healthcare facilities, the behaviors and attitudes of healthcare professionals, the timeliness of services, and the financial

aspects such as fees paid by patients<sup>(13)</sup>. In addition, factors such as the cleanliness of the hospital, the presence of competent and skilled employees, effective interpersonal communication, respect for patient privacy, and the hospital's ability to adapt to evolving and changing technology are also significant parameters that contribute to customer satisfaction and foster loyalty<sup>(14)</sup>.

Increasing patient satisfaction is achieved by ensuring that patients and their relatives are content with the healthcare services provided. To attain this satisfaction, it is crucial to assess whether the quality of healthcare services meets the expectations of patients and their relatives<sup>(15)</sup>.

For this reason, this research was designed to assess and compare the perceptions and satisfaction of patients receiving healthcare services in a training and research hospital regarding the quality of the services provided.

## PATIENTS and METHODS

The research study followed a cross-sectional and descriptive design. Data collection took place between April 16, 2021, and May 15, 2021.

### Research Population

The research population comprised patients receiving outpatient services at a training and research hospital. A simple random sampling method was employed, and a sample size of 292 participants was included in the study. Individuals aged 18 years and older were eligible for participation, while those under the age of 18 were excluded. Data collection was conducted using a questionnaire. Incomplete or incorrectly completed questionnaires were not included in the study. Out of the total of 300 questionnaires collected, eight were excluded due to incompleteness.

### Analysis of Data

The research data were initially collected in Microsoft Excel and underwent necessary conversion and correction processes before being transferred to the SPSS software for analysis. Categorical variables were presented using frequencies and percentages. The reliability of the scales was assessed using the Cronbach Alpha method, and if  $\alpha > 0.70$ , the study proceeded with the analysis. The differences in socio-demographic variables were determined using ANOVA tests and t-tests.

### Data Collection Tools

In the research, data were collected using a questionnaire form that included questions developed by the researchers based on a review of the literature. The survey utilized in the study was the one used by the Ministry of Health to assess satisfaction in hospitals<sup>(16)</sup>. Opinions and feedback

were obtained from six experts in the field of quality and accreditation to validate the survey. The research comprises an introduction, as well as two main sections. The first section consists of three questions that assess the socio-demographic characteristics of the participants. The second section includes a 24-item questionnaire aimed at evaluating outpatient patient satisfaction. The Personal Information Form, prepared by the researchers, collects socio-demographic information such as age, gender, and educational status of the participants.

### Validity and Reliability

A Cronbach's Alpha reliability test was conducted on the 24-item questionnaire administered to a total of 292 participants. The overall scale demonstrated a high level of reliability, with a Cronbach's Alpha value of 0.936. These findings indicate that the research scale is considered to be reliable.

## RESULTS

In the study, the demographic characteristics of the participants, including gender, age, and educational status, were examined, and presented in terms of frequency and percentage values. As shown in Table 1, out of the participants, 47.6% were female and 52.4% were male, indicating a relatively equal gender distribution. In terms of age, the majority of participants (51%) were under the age of 40. Regarding educational status, the highest percentage (44.5%) was primary school graduates.

Satisfaction with medical services was reported to be very high ( $4.24 \pm 0.91$ ). Satisfaction with nursing services was also rated at a high level ( $4.13 \pm 1.05$ ), as well as satisfaction with laboratory services ( $4.15 \pm 1.05$ ) and radiology services ( $4.16 \pm 1.00$ ). Satisfaction with other services was also found to be high (mean score:  $3.83 \pm 1.02$ ).

When examining Table 3, the results of the t-test indicate that there is no significant difference ( $p > 0.05$ ) in terms of gender variable regarding satisfaction with medical services, nursing services, laboratory services, radiology services, and other services.

Upon examining Table 4, the results of the ANOVA test indicate that there is no significant difference ( $p > 0.05$ ) in the average satisfaction with medical services, nursing services, laboratory services, radiology services, and other services in terms of the age variable.

Based on the results of the ANOVA test, it was determined that there is no significant difference ( $p > 0.05$ ) in satisfaction with laboratory services and radiology services in relation to the participants' educational status.

The results of the one-factor ANOVA indicated a significant difference ( $F = 4.977, p < 0.01$ ) in satisfaction with medical services among different educational status groups. Post-hoc analysis using the Tukey test revealed that the average satisfaction of primary school graduates was significantly higher than that of undergraduate and higher graduates. Therefore, educational status was identified as a factor influencing satisfaction with medical services.

**Table 1. Socio-demographic characteristics of the participants**

Variable		n	%
Gender	Female	138	47.6
	Male	152	52.4
	<b>Total</b>	<b>290</b>	<b>100</b>
Age	Below 20	36	12.3
	20-29	48	16.4
	30-39	66	22.6
	40-49	50	17.2
	50-59	56	19.2
	Over 60	36	12.3
	<b>Total</b>	<b>292</b>	<b>100</b>
Educational Status	Primary and below	130	44.5
	High school	62	31.5
	University and above	70	24.0
	<b>Total</b>	<b>292</b>	<b>100</b>

**Table 2. Descriptive statistics**

Dimensions	Range	x	SD
My physician was kind and caring.	1-5	4.48	0.94
My physician gave enough time for the examination.	1-5	4.21	1.10
An explanation was given about the diagnosis, my treatment plan, test, and examination results.	1-5	4.23	1.03
I was informed about the procedure to be performed.	1-5	4.19	1.07
My physician gave clear answers to my questions.	1-5	4.18	1.07
My physician informed me about the use of the medications written on my prescription.	1-5	4.18	1.10
<b>Medical Services</b>	<b>1-5</b>	<b>4.24</b>	<b>0.91</b>
The nurse was kind and caring.	1-5	4.13	1.13
I was satisfied with the nursing practices. (Blood collection, injection, etc.)	1-5	4.18	1.09
The training that the nurse gave me met my requirements.	1-5	4.07	1.15
<b>Nursing Services</b>	<b>1-5</b>	<b>4.13</b>	<b>1.05</b>
I was given my test results within the specified time.	1-5	4.16	1.07
I was informed about the waiting time and the reason.	1-5	4.14	1.12
<b>Laboratory Services</b>	<b>1-5</b>	<b>4.15</b>	<b>1.05</b>
The radiology department staff were kind and caring.	1-5	4.14	1.07
My privacy was taken care of.	1-5	4.21	1.05
I was given my radiology results within the specified time.	1-5	4.18	1.03
I was informed about the waiting time and the reason.	1-5	4.10	1.13
<b>Radiology Services</b>	<b>1-5</b>	<b>4.16</b>	<b>1.00</b>
I was satisfied with the security services.	1-5	3.96	1.27
The decoration, silence and lighting were enough.	1-5	3.95	1.29
The air conditioning was adequate and suitable for the need.	1-5	3.89	1.32
The hospital was clean.	1-5	3.90	1.30
I was satisfied with the parking services.	1-5	3.47	1.39
Thanks to the in-hospital orientation signs, I was able to reach the place I wanted without problems.	1-5	3.81	1.30
I was able to worship at the house of worship.	1-5	3.89	1.21
During the transitions between departments and during the check-out process, the staff on duty provided assistance in transporting the patient.	1-5	3.77	1.21
The hospital provided me with information about my patient by sending an SMS.	1-5	3.82	1.21
<b>Other services</b>	<b>1-5</b>	<b>3.83</b>	<b>1.02</b>

x: Mean, SD: Standard deviation.

The results of the one-factor ANOVA indicated a significant difference ( $F= 9.201$ ,  $p< 0.001$ ) in satisfaction with nursing services among different educational status groups. Post-hoc analysis using the Tukey test revealed that the average satisfaction of primary and high school graduates was significantly higher than that of undergraduate and higher graduates. Therefore, educational status was identified as a factor influencing satisfaction with nursing services.

The results of the one-factor ANOVA revealed a significant difference ( $F= 8.312$ ,  $p< 0.001$ ) in satisfaction with other services among different educational status groups. Post-hoc analysis using the Tukey test indicated that the average satisfaction of primary and high school graduates was significantly higher than that of undergraduate and higher graduates. Thus, educational status was identified as a factor influencing satisfaction with other services.

**Table 3. Analysis results of satisfaction score averages according to gender variable**

	Gender	x	SD	t	p
Medical Services	Female	4.25	0.88	0.137	0.891*
	Male	4.23	0.95		
Nursing Services	Female	4.13	1.03	0.093	0.926*
	Male	4.11	1.04		
Laboratory Services	Female	4.17	1.06	0.238	0.812*
	Male	4.13	1.05		
Radiology Services	Female	4.48	0.67	0.261	0.215*
	Male	4.42	0.65		
Other services	Female	4.31	0.72	0.197	0.116*
	Male	4.21	0.70		

x: Mean, SD: Standard deviation.

\*p< 0.05.

## DISCUSSION

In our study, satisfaction with medical services has been found at a remarkably high level. Demirci et al. found a moderate level of satisfaction with physician examinations<sup>(17)</sup>. In the study conducted by Bad et al., Ren et al., Tang, and Bişkin, satisfaction with physician services has been found at a high level<sup>(15,18-20)</sup>. These results are similar to our results. In the study conducted by Yu et al., the level of satisfaction with physician services was found to be at a low level. This result differs from ours<sup>(21)</sup>. There is no significant difference in satisfaction with medical services according to sociodemographic characteristics, age, and gender. Demirci et al. did not find a significant difference in terms of gender in their study<sup>(17)</sup>. This result is similar to our study. A significant difference has been found according to education status. The satisfaction of the undergraduate and higher participants was lower than that of primary school graduates. It can be inferred that participants with higher education levels tend to have higher expectations. Demirci et al. and Yazan et al. did not find a significant difference in terms of educational status in their studies. These results differ from our study<sup>(3,17)</sup>.

In our study, satisfaction with nursing services has been found at a high level. Michael et al., Demirci et al., Bişkin, and Mersinlioğlu and Öztürk's studies found a high level of satisfaction in nursing services<sup>(15,17,22,23)</sup>. These results are similar to our results. There is no significant difference in satisfaction with nursing services according to sociodemographic characteristics, age, and gender. Demirci et al. did not find a significant difference in terms of gender in their study<sup>(17)</sup>. In the studies conducted by Mersinlioğlu and Öztürk, there is no significant difference in satisfaction

with nursing services according to sociodemographic characteristics, age, and gender<sup>(23)</sup>. This result is similar to our study. A significant difference has been found according to education status. The satisfaction of the undergraduate and higher participants was lower than that of primary and high school graduates. It can be inferred that participants with higher education levels tend to have higher expectations. In the studies conducted by Mersinlioğlu and Öztürk, there was a significant difference in satisfaction with nursing services according to sociodemographic characteristics and educational status<sup>(23)</sup>. The satisfaction level of university graduates was found to be lower. This result is similar to our study. Demirci et al. did not find a significant difference in terms of educational status in their study<sup>(17)</sup>. This result differs from our study.

In our study, satisfaction with laboratory services has been found at a high level. In the study of Kırılmaz, the level of satisfaction with laboratory services was high. These results are similar to our results. There is no significant difference in satisfaction with laboratory services according to sociodemographic characteristics, age, gender, and educational status. In the study of Kırılmaz, a significant difference has been found in terms of age and educational status. This result differs from our study.

In our study, satisfaction with radiology services has been found at a high level. In the study of Kırılmaz, the level of satisfaction with radiology services was high<sup>(24)</sup>. These results are similar to our results. There is no significant difference in satisfaction with radiology services according to sociodemographic characteristics, age, gender, and educational status. In the study of Kırılmaz and Ajam et al., a significant difference has been found in terms of age and educational status. This result differs from our study<sup>(24,25)</sup>.

**Table 4. Analysis results of the average satisfaction score according to the age variable**

	Age	x	SD	F	p
Medical Services	Below 20	4.13	1.12	2.003	0.082*
	20-29	3.93	1.12		
	30-39	4.26	0.83		
	40-49	4.57	0.60		
	50-59	4.06	0.96		
	Over 60	4.56	0.61		
Nursing Services	Below 20	4.30	1.00	2.274	0.050*
	20-29	3.69	1.22		
	30-39	3.97	1.06		
	40-49	4.51	0.79		
	50-59	4.00	1.04		
	Over 60	4.48	0.97		
Laboratory Services	Below 20	4.14	1.17	2.037	0.097*
	20-29	3.83	1.25		
	30-39	4.17	0.91		
	40-49	4.58	0.76		
	50-59	3.87	1.04		
	Over 60	4.39	1.10		
Radiology Services	Below 20	4.08	1.31	1.627	0.157*
	20-29	4.14	0.95		
	30-39	3.96	1.05		
	40-49	4.47	0.96		
	50-59	3.94	0.90		
	Over 60	4.54	0.58		
Other services	Below 20	3.75	1.19	0.608	0.721*
	20-29	3.87	1.05		
	30-39	3.66	1.07		
	40-49	4.05	0.80		
	50-59	3.73	0.97		
	Over 60	4.00	1.12		

x: Mean, SD: Standard deviation.

\*p&lt; 0.05.

In our study, satisfaction with other services has been found at a high level. In the study conducted by Zhou, satisfaction with other services was found to be at a very high level<sup>(26)</sup>. Ren et al, Demirci et al., Bişkin, and Kırılmaz found a high level of satisfaction in other services<sup>(15,17,19,24)</sup>. These results are similar to our results. There is no significant difference in satisfaction with other services according to

sociodemographic characteristics, age, and gender. Demirci et al. identified a significant difference based on gender in their study, while Yazan et al. and Arslanoğlu and Varol found significant differences based on gender and age. Similarly, Kırılmaz also reported a significant difference based on age<sup>(3,17,24,27)</sup>. This result differs from our study. A significant difference has been found according to

**Table 5. Analysis results of satisfaction score averages according to the variable of educational status**

	Educational Status	x	SD	F	p	Difference
Medical Services	Primary	4.46	0.70	4.977	0.008*	C< A
	High school	4.21	0.95			
	University and over	3.88	1.10			
Nursing Services	Primary	4.42	0.81	9.201	0.000**	C< A, B
	High school	4.18	0.95			
	University and over	3.52	1.32			
Laboratory Services	Primary	4.35	0.90	2.187	0.116*	
	High school	4.04	1.09			
	University and over	3.93	1.21			
Radiology Services	Primary	4.26	0.87	0.775	0.463*	
	High school	4.14	1.01			
	University and over	4.01	1.17			
Other services	Primary	4.10	0.87	8.312	0.000**	C< A, B
	High school	3.88	0.93			
	University and over	3.27	1.19			

x: Mean, SD: Standard deviation.

\*p< 0.05.

\*\*p< 0.001.

education status. The satisfaction of the undergraduate and higher participants was lower than that of primary school graduates. It can be inferred that participants with higher education levels tend to have higher expectations. Demirci et al. and Yazan et al. did not find a significant difference in terms of educational status in their studies<sup>(3,17)</sup>. These results differ from our study. In the study conducted by Kırılmaz, Arslanoğlu and Varol a significant difference was found in terms of educational status. The satisfaction scores of the university graduate participants were low<sup>(24,27)</sup>. This result is similar to our results.

## CONCLUSION

As a result of the findings obtained, the satisfaction of the outpatients has been found at a high level. Satisfaction with medical services has been found at a very high level. While satisfaction with nursing services ranked at the 2<sup>nd</sup> highest level, satisfaction with other services is at the lowest level

Several recommendations were proposed to improve outpatient satisfaction at the research hospital. These suggestions involve undertaking improvement initiatives for services such as security, cleanliness, ventilation, air conditioning, lighting, parking, signage, places of worship, and communication, which fall under the category of other services.

**Ethics Committee Approval:** The approval for this study was obtained from University of Health Science Hamidiye Scientific Research Ethics Committee (Decision no: 2021/18/12, Date: 08.06.2021).

**Informed Consent:** This is retrospective study, we could not obtain written informed consent from the participants.

**Peer-review:** Externally peer-reviewed.

**Author Contributions:** Concept/Design - All of authors; Analysis/Interpretation - All of authors; Data Collection - All of authors; Writing - All of authors; Critical Revision - All of authors; Final Approval - All of authors; Statistical Analysis - All of authors; Overall Responsibility - All of authors.

**Conflict of Interest:** The authors have no conflicts of interest to declare.

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