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Türk Toplumu İçin Hasta Kalite Değerlendirme Ölçeği-Akut Bakım Versiyonu Geçerlilik-Güvenirlik Çalışması ve Hastaların Aldıkları Hemşirelik Bakımının Kalitesinin Belirlenmesi

Validity-Reliability Study of the Patient's Assessment of Quality Scale-Acute Care Version for Turkish Society and Determine of the Quality of Nursing Care Received by Patients

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ÖZ

Amaç: Bu çalışmanın amacı, Hasta Kalite Değerlendirme Ölçeği-Akut Bakım Versiyonu güvenirliğini ve geçerliğini gerçekleştirerek literatüre katkıda bulunmak ve hastanede yatan hastaların aldıkları hemşirelik bakımının kalitesini belirlemektir.

Yöntem: Bu çalışma, metodolojik ve tanımlayıcı tiptedir. Çalışma, Türkiye'nin güney kesiminde yer alan bir şehirde dört farklı hastanede gerçekleştirilmiştir. Veriler, "Hasta Tanıtım Formu" ve "Hasta Kalite Değerlendirme Ölçeği-Akut Bakım Versiyonu" ile toplanmıştır. İstatistiksel analizler, IBM SPSS Statistics 22 ve AMOS kullanılarak yapılmıştır. İstatistiksel anlamlılık $p<0.05$ olarak alınmıştır.

Bulgular: Analiz sonrasında Hasta Kalite Değerlendirme Ölçeği-Akut Bakım Versiyonu DFA uyum indeksleri uygun aralıkta bulunmuş. Cronbach's Alpha 0,971 ile çok iyi derecede saptanmıştır. Hasta Kalite Değerlendirme Ölçeği-Akut Bakım Versiyonu toplam puan ortalaması 136,63±21,47'dir. Hastaların hemşirelik bakım kalitesine yönelik değerlendirmelerinin, hastane tipi, hastaların tanısı, yaşadıkları yer, aldıkları hemşirelik bakımına yönelik memnuniyet düzeyleri ve hemşirelik bakımını yeterli bulma durumlarından etkilendiği saptanmıştır.

Sonuç: Araştırma sonucunda, Hasta Kalite Değerlendirme Ölçeği-Akut Bakım Versiyonu Türkçe versiyonunun Türk toplumu için geçerli ve güvenilir bir ölçüm aracı olduğu belirlenmiştir. Hastaların aldıkları hemşirelik bakım kalitesini, ortalamanın üzerinde değerlendirdikleri görülmüştür. Çalışma sonuçları, hemşirelik bakım kalitesinin arttırılması için hastane yönetimi, sağlık bakım politika geliştiricileri ve hemşireler tarafından kullanılmalıdır. Hemşireler, hemşirelik bakımının kalitesini artırmak için hastaların hemşirelik bakımı algılarını, deneyimlerini, hemşirelik bakımını etkileyen faktörleri ve hastaların bireysel farklılıklarını dikkate almalıdır.

Anahtar Kelimeler: Hemşirelik, Bakım, Kalite, Hasta, Ölçek, Geçerlik-güvenirlik.

ABSTRACT

Objective: The aim of this study is to contribute to the literature by realizing the reliability and validity of the Patient Quality Assessment Scale-Acute Care Version and to determine the quality of nursing care received by hospitalized patients.

Methods: This study is methodological and descriptive. This study was conducted in four different hospitals in a city located in the southern part of Turkey. Data were collected by the researchers using the "Patient Information Form" and the "Patient

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Quality Assessment Scale-Acute Care Version". Statistical analyses were performed using the IBM SPSS Statistics 22 and AMOS. Statistical significance was taken $p<0.05$.

Results: After the analysis, the CFA fit indices of the Patient Quality Assessment Scale-Acute Care Version were found in the appropriate range and the Cronbach alpha coefficient was 0.971. The Patient Quality Assessment Scale-Acute Care Version total mean score was 136.63±21.47. Perceptions of patients regarding Quality Nursing Care were affected by factors such as the type of hospital, patients' diagnosis, place of living, level of satisfaction with the nursing care received, and finding the nursing care sufficient.

Conclusion: The Turkish version of the Patient Quality Assessment Scale-Acute Care Version was found valid and reliable for Turkish society. The patients found the quality of the nursing care received above-average. The results of the study should be used by hospital management, health care policy developers and nurses to increase the quality of nursing care. Nurses should consider patients' perceptions of nursing care, their experiences, factors affecting nursing care, and individual differences of patients in order to improve the quality of nursing care.

Key words: Nursing, Care, Quality, Patient, Scale, Validity-reliability.

1. INTRODUCTION

The purpose of the presentation of the health services is to provide services with high efficiency, more quality, and low cost (1-3). The literature defines the quality of care as the balance between the benefits and hazards (4). In addition, structure process, and outputs are reported to be the indicators of the quality of medical care (4,5). Nursing care is one of the most important factors of medical care quality (1-3). In many countries, nurses constitute more than half of the health workforce and affect the organization and presentation of health services (6), and are one of the important indicators of success in the presentation of health services (7). The concept of "quality nursing care" is used in health services commonly. Assessment and measurement of quality are generally related to individuals' knowledge and awareness, expectations, and acceptable quality standards (8). The main purpose of the development of nursing care standards is to provide quality care service (9). Assessment of the quality of care provided by nurses by patients who receive care is a key standard for identifying quality nursing care. Quality nursing care requires meeting patient needs and expectations via a comprehensive care provided throughout the nursing process (8).

As a concept, the quality of care is complex and multidimensional. The quality of care can be evaluated from the perspective of the patient, institution, healthcare professionals. Quality perception is evaluated as good or bad quality and it can be expressed by the level of satisfaction of the patients. Satisfaction is not only a measure of quality, but also the purpose of the delivery of health services (4). Perceptions and patient satisfaction of patients about nursing care are crucial in the assessment of the quality of care services (9,10). The literature frequently focuses on patient satisfaction with nursing care in assessing the quality of nursing care (11-18). However, patient satisfaction is a multidimensional concept (9). Therefore, a measurement tool to be used in assessing the quality of nursing services should be as comprehensive as possible. It is not possible to improve something that is not measured or assessed, so measurement of the quality of care is one of the topics to be given importance in health institutions.

The aim of this study is to contribute to the literature by realizing the reliability and validity of the PAQS-ACV and to determine the quality of nursing care received by hospitalized patients?

2. METHOD

This study was conducted in four different institutions in a city located in the southern part of Turkey as a methodological design. The target population of the study was patients hospitalized between the 1st of January and 31st of March 2016. Sampling was performed by calculating the number of patients who were hospitalized in the surgery, internal diseases, and obstetrics clinics and considering the literature knowledge recommended for statistical procedures: a sample of 100 is classified as poor, 200 as fair, 300 as good, 500 as very good and 1000 as excellent (19). In this regard, the sample size was calculated as 690 people. As a potential data loss was considered, the sample size was increased by 25% and determined as 870. This study utilized the simple randomization method. The study included patients who volunteered to participate in the study, whose general health state was stable, who were aged 18 and over, who could communicate, and whose discharge from hospital was planned. No patients who were involved in the study were excluded or wanted to be excluded from the study.

Data Collection

Patient information form consists of 25 questions about the participating patients' socio-demographic and health and disease-related features. The PAQS-ACV, the 4-point Likert type and 44-item scale with 5 sub-scales was developed by Lynn, McMillen and Sidani (17) to enable patients to assess the quality nursing care. The PAQS-ACV sub-scales are individualization, nurse characteristics, caring, environment, and responsiveness. 18 items in the scale are scored reversely (8, 9, 10, 15, 18, 20, 24, 26, 27, 33, 34, 35, 36, 39,41, 42,43, 44). The distribution of the items according to the sub-scales: "individualization" (I) sub-scale is Item 6, 13, 16, 17, 19, 21, 22, 23, 25, 28, 29, 30, 31, 32, 37, 38 and 40; "nurse characteristics" (NC) sub-scale is Item 18, 20, 24, 26, 33, 34, 35, 36, 39, 41, 42 and 44; "caring" (C) sub-scale are Item 1, 2, 3, 4, 5, 11 and 12, "environment" (E) sub-scale is item 27 and 43; and "responsiveness" (R) sub-scale is Item 7, 8, 9, 10, 14 and 15 (17).

Statistical analyses

Statistical analyses were performed using the IBM SPSS Statistics 22 and AMOS. Normality distribution was tested with The Kolmogorov Smirnov test, Q-Q graphs, and histograms. Data analyses included descriptive statistical methods (means, standard deviations, frequencies). Explanatory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) were performed for the validity of the scale. The reliability analysis of the scale included internal consistency analysis and the split-half method. Data analyses included descriptive statistics (numbers, percentages, means, standard deviation), Student-t test and One-way ANOVA tests. The group that caused difference was identified using the Tukey HSD Post hoc test. Statistical significance was taken $p<0.05$.

Validity analyses for the PAQS-ACV: The English form of the PAQS-ACV was translated from English to Turkish by 3 academicians who are experts in their field. Later, the obtained form was evaluated by the linguist and the necessary arrangements were made. Then, the Turkish form of the scale was translated from Turkish to English by another expert, and it was presented to the author of the original scale and approved. The Turkish form obtained after translation was submitted to expert opinion for evaluation by 9 experts in terms of language

and content validity. Davis technique was used for language and content validity. Experts were asked to evaluate the comprehensibility of each item, whether it was smooth, correct, clear and clear, in the range of 1-4 points (1=not appropriate, 2=somewhat appropriate, 3=quite appropriate, and 4=very appropriate) (20). The Content Validity Index (CVI) value obtained for the whole scale was found 0.967. The scale, which was revised in line with expert opinions, was applied to a pilot group of 20 people and the comprehensibility of the expressions was tested. The data of 20 patients who were piloted were not included in the sampling. It was determined that there was no item that was not understood after the pilot application.

The Kaiser Mayer Olkin (KMO) sampling adequacy value was found 0.973 for the Turkish form of the PAQS-ACV. The Barlett Sphericity test result ($\chi 2$=28536.799; p<0.01) was found to be statistically significant. The results indicated that the data were fit for factor analysis (21). The EFA results showed that the scale had 5 factors. The five-factor structure of the scale explains 62,118% of the total variance. No items were excluded as the factor loads of the items in the Turkish form of the PAQS-ACV were >0.30 (22,23). The CFA evaluated fit indices of the Turkish form of the five-factor model. The analysis results indicated that the fit indices of the Turkish form of the PAQS-ACV were significant ($\chi 2$=4302.078; df=883, p=0.001; p<0.01). The fit indices were found NC=4.872, GFI=0.824, RMSE=0.067, CFI=0.879, NFI=0.853, RFI=0.842, IFI=0.879. As a result of the CFA, modifications were made between Item 11 and 12, 17 and 19, 21 and 22, 28 and 29, 31 and 32, 34 and 35, 35 and 36, and 38 and 40. After the modification procedures, the fit indices of the model were found to have a good level of validity (Figure 1).

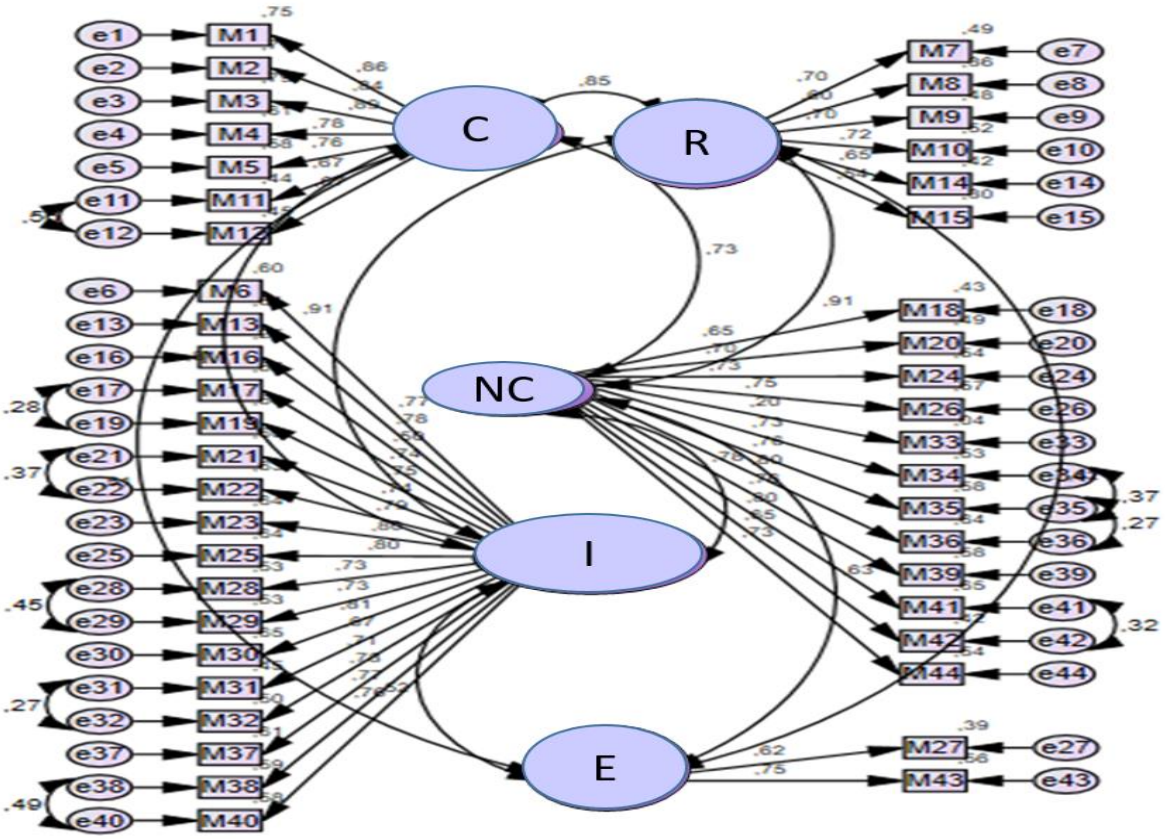

Figure 1. PATH Diagram and Factor Loads after the modification of the PAQS-A

Reliability analyses for the PAQS-ACV: Reliability analyses of the scale included internal consistency analysis and split-half method. Cronbach's alpha internal consistency coefficient was found 0.971 for the whole scale, 0.955 for the Individualization sub-scale, 0.912 for the nurse characteristics sub-scale, 0.917 for the caring sub-scale, 0.634 for the environment sub-scale, and 0.816 for the responsiveness sub-scale (Table 3). The correlation between halves was found 0.882 as a result of the split-half method.

3. RESULTS

Descriptive features of the patients are given in Table 1. Patients' average age was 37.46±15.90 (18-90 age), 56.7% were aged 35 and below, 78.7% were females. Of all the patients, 37.0% were hospitalized in a training and research hospital, 50.6% were hospitalized in obstetrics service, and 48.5% were hospitalized due to chronic disease. Besides, 84.6% were married, 29.1% graduated from primary school, and 78.7% did not work, 68.2% lived in a city, 85.3% had social security, and 76.2% had medium income (Table 1).

Table 1. Descriptive features of the patients (n=870)

		Min-Max	**Mean±SD**
Age (year)		18-90	37.46±15.90
		n	**%**
Age group	Below35	493	56.7
	35 and above	377	43.3
Gender	Female	685	78.7
	Male	185	21.3
Type of hospitals	Training and research hospital.	322	37.0
	Medical faculty	240	27.6
	Private hospital	57	6.6
	Maternity and Children hospital	251	28.9
Clinics	Internal diseases	127	14.6
	Obstetric	440	50.6
	Surgical	303	34.8
Diagnosis	Acute diseases	448	51.5
	Chronic diseases	422	48.5
Marital status	Single	134	15.4
	Married	736	84.6
Education level	Illiterate	58	6.7
	Literate	87	10.0
	Primary School	253	29.1
	Secondary school	167	19.2
	High school	188	21.6
	University	117	13.4
Working status	Employed	185	21.3
	Unemployed	685	78.7
Place of living	City	593	68.2
	District	207	23.8
	Town	70	8.0
Social security	Yes	742	85.3
	No	128	14.7
Income level	Good	107	12.3
	Medium	663	76.2
	Low	100	11.5

Patients' health and disease related features are given in Table 2. The average duration of hospitalization was 3.50±5.73 (1-90) days, 57.1% were hospitalized for less than 3 days, and the nurses' average caring mean score was 0.94±2.15 (0-10). Of all the patients, 93.4% indicated their satisfaction with nursing care with a score of 5 and above, 57.9% were hospitalized before, 2.1% experienced complications during hospitalization, 7.7% did not find the nursing care provided sufficient and 61.2% of these patients found the number of nurses working in the unit insufficient, 49.3% found nursing insufficient because they thought nurses did not want to provide care (Table 2).

Table 2. Patients' health and disease-related features

		Min-Max	**Mean±SD**
Duration of hospitalization (day)		1-90	3.50±5.73
Nursing care score		0-10	7.94±2.15
		n	**%**
Duration of hospitalization	Less than 3 days	497	57.1
	3 days and more	373	42.9
Score of satisfaction with the nursing care	Less than 5	57	6.6
	5 and more	813	93.4
Previous hospitalization	Yes	504	57.9
	No	366	42.1
Finding the nursing care given in hospital sufficient	Sufficient	614	70.6
	Partly sufficient	189	21.7
	Insufficient	67	7.7

The total mean scores they received from the PAQS-ACV sub-scales are demonstrated in Table 3. The patients' PAQS-ACV total mean score was 136.63±21.47. Cronbach's alpha of the scale was 0.971 for the general scale, and the Cronbach's alpha of the sub-scales ranged between 0.634 and 0.955 (Table 3).

Table 3. Patients' PAQS-ACV and sub-scales mean scores and Cronbach's alpha values

PAQS-ACV	**Number of items**	**Min-Max**	**Mean±SD**	**Cronbach's Alfa**
Individualization	17	17-68	51.58±9.32	0.955
Nurse characteristics	12	12-48	38.20±6.56	0.912
Caring	7	7-28	22.48±3.54	0.917
Environment	2	2-8	5.85±1.53	0.634
Responsiveness	6	6-24	18.51±3.35	0.816
Total	44	47-176	136.63±21.47	0.971

The difference between the PAQS-ACV and sub-scale and total mean score according to the patients' descriptive features is given in Table 4. Hence, nurse characteristics, caring, responsiveness sub-scales, and PAQS-ACV total mean scores of patients aged 35 and over were significantly higher compared to the patients aged below 35 ($p<0.05$). A significant difference was found between the hospitals and the individualization, nurse characteristics, caring, environment and sensitivity sub-scales, and PAQS-ACV total mean score ($p<0.05$). An analysis

of the paired Post-hoc assessment performed to find out which hospital caused differences showed that all sub-scales and PAQS-ACV total mean scores of the patients hospitalized in a maternity and children's hospital were significantly lower compared to the patients hospitalized in a training and research hospital and medical faculty ($p<0.01$). A statistically significant difference was found between the nurse characteristics sub-scale mean scores ($p<0.05$). The paired Post-hoc analysis results showed that the nurse characteristics sub-scale mean scores of the patients hospitalized in internal diseases service were significantly higher in comparison to the patients hospitalized in obstetrics service ($p<0.05$). Individualization, nurse characteristics, caring, and responsiveness subscales and PAQS-ACV total mean score of the patients who had a chronic disease were significantly higher in comparison to those who were diagnosed with an acute disease ($p<0.01$). Significant differences were found in terms of the individualization, nurse characteristics, caring, environment, and responsiveness subscales and PAQS-ACV total mean scores ($p<0.01$). Paired Post-hoc analysis performed to find out which place of living caused differences showed that individualization, nurse characteristics, caring, responsiveness sub-scales, and PAQS-ACV total mean scores of the patients who lived in city centers were significantly higher compared to the patients who lived in towns ($p<0.01$). In addition, the environment mean scores of the patients who lived in the city center were significantly higher compared to the patients who lived in towns/villages ($p<0.05$). The individualization, caring, sensitivity sub-scales and PAQS-ACV total mean scores of the patients who had social security were significantly higher compared to those who did not have social security ($p<0.05$) (Table 4).

Table 5 demonstrates the difference between the PAQS-ACV sub-scale and total mean scores according to the patients' health and disease-related features. The caring sub-scale mean score of the patients who were hospitalized for 3 days and more was found to be significantly higher compared to those who were hospitalized for less than 3 days ($p<0.05$). Individualization, nurse characteristics, caring, environment, and responsiveness sub-scales and PAQS-ACV total mean scores of the patients who had a satisfaction score of 5 and more were significantly higher compared to the patients who had a satisfaction score of 5 and less ($p<0.01$). Significant differences were found between finding the nursing care sufficient according to the individualization, nurse characteristics, caring, environment, responsiveness sub-scales and PAQS-ACV total mean scores ($p<0.01$). Paired Post-hoc analysis results performed to identify which cases caused differences showed that the nurses who found the care provided in hospitals sufficient had significantly higher scores in all sub-scales and PAQS-ACV total mean scores compared to those who found it partly sufficient and insufficient ($p<0.01$). In addition, all sub-scales and PAQS-ACV total mean scores of the patients who found the nursing care provided in the hospital partly sufficient were significantly higher in comparison to those who did not find it sufficient ($p<0.01$). Individualization, nurse characteristics, caring, responsiveness sub-scales, and PAQS-ACV total mean scores of the patients who found the care provided in hospital insufficient because they thought that nurses did not want to provide care were lower in comparison to the patients the who did not think of such reason ($p<0.01$). Environment sub-scale mean score of the patients who found nursing care insufficient as they have no expectations for care was found to be significantly higher compared to the patients who did not think of this reason ($p<0.05$) (Table 5).

Table 4. PAQS-ACV and sub-scale and total mean scores according to the patients' descriptive features

Descriptive Features		Individualization	Nurse Characteristics	Caring	Environment	responsiveness	**Total**
		Mean±SD	**Mean±SD**	**Mean±SD**	**Mean±SD**	**Mean±SD**	**Mean±SD**
Age group	**Below 35**	51.15±8.66	37.71±6.66	22.12±3.50	5.83±1.47	18.29±3.37	135.09±20.89
	35 and above	52.15±10.09	38.85±6.39	22.95±3.54	5.89±1.61	18.81±3.30	138.66±22.07
	t	-1.583	**-2.560**	**-3.448**	-0.587	**-2.278**	**-2.434**
	p	0.114	**0.011***	**0.001****	0.557	**0.023***	**0.015***
Gender	**Female**	51.57±9.39	38.03±6.79	22.45±3.60	5.86±1.51	18.46±3.47	136.36±22.09
	M ale	51.64±9.04	38.86±5.61	22.58±3.30	5.85±1.63	18.71±2.87	137.64±19.02
	t	-0.099	-1.543	-0.439	0.077	-0.889	-0.720
	p	0.921	0.123	0.661	0.939	0.374	0.472
Type of Hospitals	**Training and research hospital**		39.85±5.92	22.82±3.39	6.06±1.67	19.13±3.23	140.59±19.66
	Medical faculty	53.59±9.94	38.71±6.46	23.47±3.51	6.05±1.45	19.11±3.47	140.93±22.36
	Private hospital	50.61±7.12	37.82±5.72	22.09±2.95	5.88±1.10	18.14±2.26	134.54±15.93
	Maternity and children hospital	48.43±9.17	35.69±6.88	21.18±3.49	5.41±1.42	17.23±3.24	127.93±21.36
	F	**15.896**	**20.904**	**20.135**	**10.700**	**19.938**	**22.288**
	p	**0.001****	**0.001****	**0.001****	**0.001****	**0.001****	**0.001****
Clinics	**Internal diseases**	51.80±7.97	39.43±5.77	22.64±3.12	5.85±1.61	18.58±2.88	138.30±18.31
	Obstetric	51.49±9.24	37.68±7.16	22.32±3.71	5.84±1.50	18.39±3.62	135.72±22.74
	Surgical	51.63±9.95	38.46±5.87	22.64±3.45	5.88±1.56	18.66±3.13	137.27±20.79
	F	0.059	**3.891**	0.897	0.047	0.624	0.914
	p	0.942	**0.021***	0.408	0.954	0.536	0.401
Diagnosis	**Acute diseases**	50.60±9.02	37.49±7.03	22.05±3.71	5.85±1.52	18.07±3.48	134.06±21.96
	Chronic diseases	52.63±9.52	38.96±5.94	22.93±3.29	5.86±1.55	18.98±3.15	139.36±20.61
	t	**-3.237**	**-3.333**	**-3.684**	-0.028	**-4.026**	**-3.663**
	p	**0.001****	**0.001****	**0.001****	0.978	**0.001****	**0.001****
Marital status	**Single**	51.91±8.22	38.94±5.97	22.42±3.28	5.87±1.57	18.71±3.10	137.85±19.08
	Married	51.52±9.50	38.07±6.66	22.49±3.58	5.85±1.53	18.48±3.40	136.41±21.88
	t	0.443	1.411	-0.210	0.138	0.733	0.713
	p	0.658	0.158	0.834	0.890	0.464	0.476

Table 4. PAQS-ACV and sub-scale and total mean scores according to the patients' descriptive features (devamı)

Education level	**Illiterate**	53.41±7.47	39.60±6.12	22.90±3.19	6.09±1.48	19.29±2.94	141.29±18.83
	Literate	51.15±10.84	38.62±7.13	22.17±3.81	5.77±1.68	18.37±3.89	136.08±24.31
	Primary school	51.72±9.63	38.06±6.33	22.49±3.46	5.83±1.60	18.42±3.43	136.53±21.49
	Secondary school	50.44±9.44	36.95±7.26	22.02±3.70	5.68±1.48	17.98±3.33	133.07±22.37
	High school	51.84±8.85	38.86±5.98	22.69±3.36	5.98±1.41	18.87±3.11	138.23±20.04
	University	51.92±8.73	38.26±6.50	22.76±3.68	5.91±1.58	18.64±3.28	137.49±20.97
	F	1.062	2.224	1.131	1.018	2.024	1.734
	p	0.380	0.052	0.342	0.406	0.073	0.124
Working status	**Unemployed**	52.03±8.58	38.68±5.96	22.74±3.18	5.96±1.43	18.81±2.92	138.22±18.86
	Employed	51.46±9.51	38.08±6.72	22.41±3.63	5.83±1.56	18.43±3.46	136.21±22.12
	t	0.740	1.100	1.142	1.004	1.359	1.129
	p	0.460	0.272	0.254	0.316	0.174	0.259
Place of living	**City**	52.22±9.21	38.85±6.60	22.74±3.56	5.97±1.55	18.83±3.39	138.62±21.39
	District	50.16±9.75	36.56±6.52	21.94±3.66	5.64±1.43	17.74±3.30	132.04±22.07
	Town	50.39±8.33	37.60±5.43	21.80±2.67	5.50±1.60	18.10±2.75	133.39±17.80
	F	**4.396**	**9.909**	**5.390**	**5.820**	**8.812**	**8.204**
	p	**0.013***	**0.001****	**0.005****	**0.003****	**0.001****	**0.001****
Social security	**Yes**	51.87±9.44	38.35±6.66	22.63±3.55	5.86±1.57	18.63±3.40	137.34±21.87
	No	49.95±8.39	37.36±5.91	21.59±3.33	5.84±1.31	17.82±2.98	132.55±18.51
	t	**2.158**	1.579	**3.102**	0.100	**2.543**	**2.334**
	p	**0.031***	0.115	**0.002****	0.920	**0.011***	**0.020***
Income level	**Good**	50.85±9.56	37.48±6.07	22.50±3.67	5.74±1.57	18.29±3.00	134.85±20.99
	Medium	51.81±9.24	38.33±6.65	22.57±3.49	5.90±1.50	18.57±3.38	137.19±21.46
	Low	50.86±9.53	38.15±6.53	21.82±3.66	5.66±1.68	18.35±3.53	134.84±22.04
	F	0.829	0.783	1.976	1.471	0.467	0.943
	p	0.437	0.457	0.139	0.230	0.627	0.390

t: Student-t Test F: One-way ANOVA (Analysis of Variance) *p<0.05 **p<0.01

Table 5. Patients' PAQS-ACV sub-scale and total mean scores according to their health and disease-related features

Health and Disease Features		Individualization	Nurse Characteristics	Caring	Environment	responsiveness	Total
		Mean±SD	Mean±SD	Mean±SD	Mean±SD	Mean±SD	Mean±SD
Duration of hospitalization	Less than 3 days	51.16±9.06	37.94±6.81	22.25±3.58	5.90±1.51	18.35±3.41	135.60±21.73
	3 days and more	52.15±9.63	38.56±6.21	22.78±3.46	5.79±1.56	18.73±3.26	138.01±21.07
	t	-1.550	-1.375	**-2.214**	1.045	-1.665	-1.643
	p	0.121	0.169	**0.027***	0.296	0.096	0.101
Score of satisfaction with the nursing care	Less than 5	38.79±9.61	29.75±7.62	16.91±3.88	4.89±1.77	13.79±3.26	104.14±22.30
	5 and more	52.48±8.61	38.80±6.06	22.87±3.17	5.92±1.49	18.85±3.10	138.91±19.49
	t	**-11.509**	**-10.689**	**-13.510**	**-4.962**	**-11.861**	**-12.895**
	p	**0.001****	**0.001****	**0.001****	**0.001****	**0.001****	**0.001****
Previous hospitalization experience	Yes	51.72±9.70	38.53±6.74	22.56±3.67	5.88±1.63	18.61±3.47	137.30±22.30
	No	51.40±8.77	37.76±6.30	22.36±3.34	5.82±1.40	18.38±3.18	135.72±20.27
	t	0.496	1.696	0.846	0.600	1.026	1.076
	p	0.620	0.090	0.398	0.548	0.305	0.282
Sufficiency of the nursing care provided in hospital	Sufficient	54.04±8.19	39.71±5.88	23.42±3.11	6.08±1.46	19.32±3.02	142.57±18.76
	Partly Sufficient	47.34±8.49	35.98±6.09	20.98±2.98	5.42±1.57	17.25±3.02	126.98±18.29
	Insufficient	41.01±9.68	30.70±6.92	18.04±3.90	5.06±1.61	14.70±3.43	109.52±22.54
	F	**104.103**	**84.196**	**115.280**	**24.419**	**89.499**	**122.864**
	p	**0.001****	**0.001****	**0.001****	**0.001****	**0.001****	**0.001****
Nurses' reluctance to provide care (n=67)	Yes	37.18±10.17	28.03±7.38	16.30±4.41	4.94±1.80	13.52±3.80	99.97±24.29
	No	44.74±7.64	33.29±5.37	19.74±2.38	5.18±1.42	15.85±2.61	118.79±16.24
	t	**-3.445**	**-3.346**	**-3.985**	-0.598	**-2.944**	**-3.739**
	p	**0.001****	**0.001****	**0.001****	0.552	**0.004****	**0.001****

Table 5. Patients' PAQS-ACV sub-scale and total mean scores according to their health and disease-related features (continuation)

High number of patients hospitalized (n=67)	**Yes**	39.74±8.24	29.41±6.31	17.19±3.81	4.67±1.52	13.85±2.70	104.85±19.29
	No	41.88±10.56	31.58±7.25	18.63±3.90	5.33±1.64	15.28±3.78	112.68±24.21
	t	-0.883	-1.264	-1.495	-1.660	-1.687	-1.404
	p	0.380	0.211	0.140	0.102	0.096	0.165
Low number of nurses working in the service (n=67)	**Yes**	40.00±8.86	29.68±6.70	17.63±3.71	4.80±1.63	14.22±3.10	106.34±20.92
	No	42.62±10.84	32.31±7.08	18.69±4.17	5.46±1.53	15.46±3.84	114.54±24.45
	t	-1.079	-1.529	-1.083	-1.644	-1.455	-1.463
	p	0.285	0.131	0.283	0.105	0.150	0.148
No expectations about care (n=67)	**Yes**	40.95±9.61	30.29±7.77	17.81±4.62	5.71±1.71	15.19±3.97	109.95±24.87
	No	41.04±9.82	30.89±6.57	18.15±3.58	4.76±1.49	14.48±3.18	109.33±21.68
	t	-0.035	-0.330	-0.331	**2.317**	0.785	0.105
	p	0.972	0.742	0.742	**0.024***	0.435	0.917
Nurses' lack of time for care (n=67)	**Yes**	41.07±8.68	30.81±6.11	18.45±3.96	4.81±1.57	14.48±2.94	109.62±19.74
	No	41.74±11.40	31.26±8.43	17.85±4.13	5.48±1.58	15.19±4.03	111.52±27.30
	t	-0.276	-0.257	0.605	-1.735	-0.844	-0.335
	p	0.783	0.798	0.547	0.087	0.402	0.739

t: Student-t Test F: One-way ANOVA (Variance Analysis) *p<0,05 **p<0,01

4. DISCUSSION

In this study made for identifying patients' assessment of the quality of nursing care received and performing the validity and reliability analyses of the PAQS-ACV for Turkish society; after the statistical analysis, Turkish version of the PAQS-ACV was found to be valid and reliable for Turkish society. In addition, the results of the study are important and valuable in terms of revealing information about patients' quality nursing care.

After expert opinion evaluation, the CVI value obtained for the whole Turkish form of the PAQS-ACV was found 0.967. In the literature, the CVI value is required to be greater than 0.67 (24). Since the calculated CVI value was 0.967>0.67, the scale was found to be statistically significant. Therefore, no item was excluded from the scale in terms of content validity.

KMO sampling adequacy value was found 0.973 for the Turkish form of the PAQS-ACV. The Barlett Sphericity test result was found to be statistically significant. The results indicated that the data were fit for factor analysis (21). The variance explanation percentage of the original scale was found to be 54.0% (17). The five-factor structure of the Turkish form of the PAQS-ACV explains 62.118% of the total variance. A variance percentage explained in the literature between 0.50-0.70 is considered to be "sufficient" (24). These results show that the variance explained according to the EFA findings of the Turkish form of the PAQS-ACV was also sufficient. The fit indices of the Turkish form of the PAQS-ACV were found NC=4.872, GFI=0.824, RMSE=0.067, CFI=0.879, NFI=0.853, RFI=0.842, IFI=0.879. As a result of the CFA, modifications were made between some items. After the modification procedures, the fit indices of the model were found to have a good level of validity (Figure 1).

It has been reported that the Cronbach alpha coefficients of the original scale ranged from 0.68 to 0.94 (17). Cronbach's alpha internal consistency coefficient was found 0.971 for the whole Turkish form of the PAQS-ACV. It was determined that the Cronbach alpha values of the subscales of the scale ranged from 0.634 to 0.955 (Table 3). In the literature, Cronbach's alpha coefficient is interpreted as reliability increases as the reliability coefficient approaches (22). These results show that the Turkish form of the PAQS-ACV is reliable.

Patients' perception of care quality is an important criterion used in the assessment and improvement of health services (12,14,18). Nursing care is the fundamental component of health service (25). Therefore, an investigation of patients' perceptions about the quality nursing care is an important part of quality assessment (26). This study utilized the PAQS-ACV to assess patients' perceptions of nursing quality care (17). In line with the total mean scores obtained from the PAQS-ACV and all sub-scales, the patients were found to assess the nursing quality of care as "above average". Various scales have been utilized in the literature for assessing patients' perceptions about quality of nursing care. Studies that utilized different scales reported good levels of patient perceptions about the quality of nursing care (15,16). However, Gishu et al. (14) reported that patients' perceptions about the quality nursing care were not sufficiently satisfying; Hussami et al. (18) assessed patients' perceptions about hospital services and quality nursing care and stated that patients' perception levels were low (14-18). Kewi et al. (10) reported that patients' perception levels of quality nursing care were generally low (10). These results are considered to be affected by the differences in the scales used, sample size, and features of the sample, and place of the study.

The literature reports that patients' age could affect perceptions about the quality nursing care (9). This study found that patients had more positive perceptions about PAQS-ACV and nurse characteristics, caring, and responsiveness sub-scales with the increase in their age. Similarly, Karaca and Durna reported that elderly patients' satisfaction with the quality nursing care was higher (25). This finding might be associated with nurses' allocating more time to elderly individuals' care as they need more care.

Patients' perceptions about the quality nursing care are crucial for health institutions as it is an important indicator of the quality of care provided in hospitals (9,10). The literature reports that nursing quality of care is affected by hospital facilities and services (18). Patients' hospitalization in a training and research hospital or medical faculty in this study were found to have positive effects on PAQS-ACV and all sub-scales perceptions of patients hospitalized in these hospitals about quality nursing care were found to be higher compared to patients hospitalized in a maternity and children hospital. Karayurt et al. (27) reported that 78.9% of the nurses thought that the facilities provided for personalized care in hospitals were insufficient (27). Other studies that evaluated the care satisfaction of patients hospitalized in different hospitals reported higher satisfaction levels among patients hospitalized in private hospitals (26). With more appropriate hospital conditions, nurses could spend more time on patients' care (18). Some other studies reported that the hospital had no effects on satisfaction levels (28,29). These results indicate that despite different effect levels, health institutions have effects on the assessment of the quality of nursing services. The literature indicates that the presence of a chronic disease could affect patients' expectations about care (11,30) This study also found that having chronic disease had positive effects on PAQS-ACV and individualization, nurse characteristics, caring and responsiveness sub-scales; perceptions of these patients about the quality nursing care were found to be higher. Individuals with a chronic disease are reported to have better opportunities for assessing nursing care during hospitalization (16). In addition, patient expectation and satisfaction can be affected negatively in repeated hospitalizations due to a chronic disease (31). Hence, perception of the quality nursing care is considered to be affected by many factors such as the presence of chronic disease, its severity, patient expectations, treatment status, and possibility and duration of recovery. Patients' socio-demographic characteristics are reported to affect satisfaction with health services (18). Participating patients living in city centers was found to affect PAQS-ACV and all sub-scales positively; perceptions of these patients about the quality nursing care were found to be higher compared to the ones living in towns. In their meta-analysis, Mulugeta et al. (32) reported that although the difference was not statistically significant, satisfaction with the nursing care was 7% higher in patients in comparison to the patients living in the rural area (32). However, different studies also report that place of living had no effects on nurses' care behaviors (1,33). Hence, patients' place of living seems to be important in assessing the quality nursing care.

Patients' past experiences are reported to have effects on their expectations (1). This study found that patients' past experiences did not have effect on their perceptions of quality nursing care. Similarly, Kewi et al. (10) and Gul and Dinc (1) reported that patients' previous hospitalization experiences did not affect their perceptions about the quality nursing care; these results are in line with the related literature (1,10).

Patient satisfaction is one of the important indicators of quality of care used in the assessment of nursing and general quality of care in health services (9,14,18,25). The patients

were asked to evaluate their satisfaction level with nursing care out of ten, and patients' perceptions about the quality of care were assessed with PAQS-ACV and all sub-scales. Patients with a satisfaction level of 5 and over (93.4%) were found to have higher perceptions about the quality of care in comparison to others. Similarly, Gul and Dinc (1) stated that the majority of the patients were satisfied with the nursing care, and they had more positive care perceptions as their satisfaction levels increased. These results indicate the crucial role of patient satisfaction in the improvement services to be performed in quality of care. Sufficient care to be provided to patients is among the fundamental responsibilities of nursing (33,34). Patient satisfaction is an important criterion in the assessment of health services (9). This study assessed the sufficiency of the care provided in hospitals as perceived by patients and the reasons for perceived insufficiency. The majority of the patients (70.6%) reported that they found the nursing care provided in the hospital sufficient, and perceptions about the quality nursing care were found to be higher in patients who found the nursing care sufficient. Similarly, Karaman Ozlu and Uzun (35) reported that 37.7% of the patients assessed the nursing care they received as “very good”, 45.3% as “good”, and 0.8% as “very poor”; statistically significant differences were found between the groups (35). Olowe A Folami and Odeyemi (36) reported that satisfaction with the quality nursing care was "excellent" for the majority of the patients throughout their hospitalization (36). The results are in line with the literature.

5. CONCLUSION

The Turkish form of the PAQS-ACV was found to be valid and reliable for Turkish society. The patients were found to assess the QNC as "above average", and their perceptions about the QNC were affected by variables such as the type of hospital, patients' diagnosis, place of living, satisfaction with nursing care, and finding the nursing care sufficient.

The correct planning of nursing care, the development and improvement of the quality of care, and the correct and timely implementation of the planned care will increase the patients' receiving quality nursing care and the satisfaction with the care, as well as the job satisfaction and performance of the nurses. It is important to periodically evaluate patients' satisfaction with nursing care and their perception of care with measurement tools that provide valid, reliable, applicable, and administrators-usable data. The results of this study are predicted to contribute to monitoring the level of care quality perceived by patients, determining the factors affecting nursing care and patients' expectations, making and implementing necessary changes in nursing care, and evaluating it as an evidence-based indicator showing the contribution of nursing to patient care. The use of these results by both hospital management and nurse educators will contribute to improving the quality of nursing care. In addition, hospital management should support nurses by providing appropriate environments and conditions for nurses to provide quality care. In addition, the Turkish form of the PAQS-ACV is recommended to be used to assess patient’s perceptions about the QNC in future studies.

Study Limitations

This study was limited to the surgery, internal diseases, and obstetrics services of the four hospitals and the nurses who provided care to these patients; Hence, the results can be generalized only to this population.

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Ethicial Considerations

Ethics committee approval was obtained from the Ethics Committee of Medical Faculty Non-invasive Clinical Studies Ethics Committee. It was conducted in accordance with the principles of the Declaration of Helsinki. The permission of the relevant hospitals and informed consent of the participants were also obtained. The author's permission was obtained for the use of the PAQS-ACV

Conflict of Interest

The authors declare no conflict of interest.

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