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Attitudes of Nurses Towards Patient Safety Culture and the Factors Affecting Patient Safety: Descriptive Research

Hemşirelerin Hasta Güvenliği Kültürüne İlişkin Tutumları ve Hasta Güvenliğini Etkileyen Faktörler: Tanımlayıcı Araştırma

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ABSTRACT Objective: Patient safety, refers to all of measures taken by health professionals working in health institutions to prevent the individuals from being harmed by the care in the delivery of the health services.It was conducted to determine the extent to which nurses working in a university hospital perceive the patient safety culture and to identify the factors that affect these views. **Material and Methods:** The population consisted of 140 nurses who worked in a university hospital that was completed with 82.9% (n=116) of the population were reached.The data were collected using the "Questionnaire" prepared to determine the socio-demographic characteristics of nurses and "Hospital Survey on Patient Safety Culture" developed by Filiz et al. The data were analysed using SPSS 24 programme. **Results:** It was found that 33.6% (n=39) of the nurses were between the ages of 18-25, 90.5% (n=115) were female, 54.3% (n=63) were married, 73.3% (n=85) were health vocational high school/associate degree graduates, 31% (n=36) had less than 5 years of professional experience, and 28.4% (n=33) of them had a professional experience between 17-27 years, and 65.5% (n=76) of them had less than 5 years of working in the institution. Nurses' perceptions on the patient safety culture were good, with 3.75±0.55 (75 out of 100), while patient safety ratings were excellentin 44.8% (n=52) and very good in 47.4% (n=55). **Conclusion:** In this study, it was concluded that the perception levels of patient safety culture were greater in those who were female, aged between 34-41 years and had an undergraduate or higher degree, implying that patient safety was more important in these groups.

Keywords: Patient safety; nurse; patient safety culture

ÖZET Amaç: Hasta güvenliği; sağlık hizmetleri sunumunda bakımın kişilere vereceği hasarı önleyebilmek amacıyla sağlık kurumlarındaki çalışan sağlık profesyonellerince alınan önlemlerin bütünüdür. Bir üniversite hastanesinde görev yapan hemşirelerin hasta güvenliği kültürünü algılama seviyelerini belirlemek ve bu görüşleri etkileyen faktörleri saptamak amacıyla yapılmıştır. **Gereç ve Yöntemler:** Araştırmanın evrenini bir üniversite hastanesinde çalışan 140 hemşire oluşturmuş, %82,9'una (n=116) ulaşılarak çalışma tamamlanmıştır. Araştırma verilerinin toplanmasında hemşirelerin sosyodemografik özelliklerini belirlemek amacı ile oluşturulan "Anket Formu" ile Filiz ve ark. tarafından geliştirilen "Hasta Güvenliği Kültürü Hastane Anketi" kullanılmıştır. Veriler SPSS 24 programı ile analiz edilmiştir. **Bulgular:** Hemşirelerin, %33,6'sının (n=39) 18-25 yaş aralığında, %90,5'inin(n=115) kadın, %54,3'ünün (n=63) evli, %73,3'ünün (n=85) sağlık meslek lisesi/ön lisans mezunu olduğu, %31'inin(n=36)mesleki deneyimi 5 yıldan az ve %28,4'ünün (n=33) 17-27 yıl arası; kurumda çalışma yılı ise %65,5'inin (n=76) 5 yıldan az olduğu bulunmuştur.Hemşirelerin hasta güvenliği kültür algıları 3,75±0,55 (100 üzerinden 75) ile iyi düzeyde olduğu, hasta güvenliği derecelendirmeleri %44,8 (n=52) mükemmel, %47,4 (n=55) çok iyi olarak bulunmuştur. **Sonuç:** Bu çalışmada, 34-41 yaş arasında, kadın ve lisans ve üzeri eğitim alan hemşirelerin hasta güvenliği kültürü algılama seviyelerinin daha yüksek olduğu başka bir ifadeyle bu gruplarda hasta güvenliğinin daha fazla önemsendiği sonucuna ulaşılmıştır.

Anahtar Kelimeler: Hasta güvenliği; hemşire; hasta güvenliği kültürü

Institutions that provide healthcare services should have the competence and equipment that will enable people to access the health services they need and to get safe, timely, effective, equitable, and fair health services from a patient-oriented standpoint.[1] Given that the fundamental philosophy of healthcare services is "nonmaleficence", patient safety is defined as the avoidance of any events that may have negative outcomes for patients by establishing a physical and psychological environment of trust for them.[2,3] The National Patient Safety Foundation defines patient safety as "the prevention of errors associated with health care that patients receive, as well as the reduction, full elimination, or elimination of harm

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caused by errors associated with health care".[3-6] Another definition of patient safety is "all actions that intend to eliminate or minimize the negative consequences that come about as a result of the health service process".[7] Monitoring and recording events that endanger the safety of patients and staff in the health sector, minimizing losses due to medical errors, and reducing significant human and material losses have all gained importance, and the concept of "Patient Safety Culture" has arisen.[8] The European Society for Quality in Health Care defines patient safety culture as "an integrated institutional and individual pattern of behaviour based on common beliefs and values that seek to minimize error in patient care and aim to prevent harm that might arise from the care delivery processes".[9]

The health institutions that intend to assure absolute patient safety and raise awareness of this issue have comprehended the importance of patient safety culture and have established this culture throughout the institutions as the first and primary step.[10-12] Developing a safety culture is a basic element of many practices to improve patient safety and quality of care. In other words, it generates quantifiable data about patient safety by identifying what is supported in a setting, what is expected, and what behaviours are acceptable.[13,14]

Establishing a system with good leadership, corporate commitment among employees, support for quality, capacity to work with team understanding, and employee motivation through corporate incentives is important for building a patient safety culture at institutions.[11,15,16] An effective patient safety culture is achieved by determining why the patient safety culture is important in the institution, its necessity, and the required measures, raising awareness, planning training for the working staff both before recruitment and regularly, informing the institution managers and staff members as well as patients about this issue, and increasing awareness.[6,16]

PURPOSE

This study was conducted to determine the extent to which nurses working in a university hospital perceive the patient safety culture and to identify the factors affecting these views.

MATERIAL AND METHODS

The population of this descriptive study consisted of 140 nurses who were working in hospital. It was intended to reach the entire population in the sample selection, and the study was concluded with 82.9% (n=116) of the population. The study was conductedin accordance with the principlee of the Helsinki Declaration.

Permission was obtained by e-mail from Emel Filiz, whose validity and reliability of the Patient Safety Culture Hospital Questionnaire used in the clinical field was conducted in 2009. In addition, permission was obtained from the Clinical Research Ethics Committee of TOBB ETU Faculty of Medicine (date: June 30, 2021, no: KAEK-118/103) to conduct the study.

DATA COLLECTION TOOLS

The "Hospital Survey on Patient Safety Culture," whose validity and reliability was conducted by Filiz in 2009, was utilized together Demographic and Clinical Information Data Form (a total of 12 questions, including age, education, gender, marital status, total employment time, employment time at the institution, employment type, overtime, patient safety training, and time), prepared by the researchers. The Demographic and Clinical Information Data Form and Hospital Survey on Patient Safety Culture (with questions that measure the areas of patient safety culture on a unit basis and at the institutional level, as well as questions involving outcome variables) were shared on the internet (Google Forms) (Alphabet Inc., California). It was planned by the researchers to upload the survey to Google Forms, integrate the survey into the researcher's account on Google Forms, and assure data security in this way. Before beginning the survey, the Informed Consent Form was included in the survey uploaded to Google Forms, and the participant's consent was acquired online before beginning the survey.[16]

DATA COLLECTION

The data were collected between 01.06.2021 and 01.01.2022 by sending a link to the nurses who worked in the hospital.

DATA ANALYSIS

In the statistical analysis of the findings of the study, the SPPS 22.0 package programme (SPSS Statistics for Windows , Version 22.0. IBM Corp., Armonk, NY, USA) was employed. The percentage distributions were used in the statistical evaluations between demographic variables and patient safety, the chi-square test was employed to investigate whether or not there was a significant difference in the comparisons between the two groups. "Student's t-test" was applied on paired independent groups, the "One-Way ANOVA test" was used for groups with more than two numbers, and the "Tukey HSD test" was performed to identify from which group the correlation originated. The data were analysed at the confidence interval of 95% and the significance level of $p<0.05$.

There are questions on patient safety and patient safety education, as well as sociodemographic characteristics and professional information, in the survey that participants are asked to fill out. The statements to the survey items "A5, A7, A8, A10, A12, A14, A16, A17, B3, B4, C6, F2, F3, F5, F6, F7, F9, and F11" are reversed. While sections A, B, and F are rated with the options of "agree", "strongly disagree," "disagree", "neither agree nor disagree" and "strongly agree"; sections C and D are rated with the options of "never," "rarely," "sometimes," "often", and "always." In Section E, the degree of patient safety is assessed on a 5-point Likert scale with the statements "very good", "excellent", "good", "fair" and "poor". In section G, the number of reported cases is asked by classification. After scores of the reversed questions in the survey were calculated, which items belonged to which subscale was determined. Positive responses to each item were calculated as: "strongly agree (5)", "agree (4)", "often (4)", and "always (5)." Positive responses for all items were calculated. The result obtained was divided by the number of items and the result was considered as the percentage of positive answers. According to the calculation rules of the scale, the responses "strongly agree (1)", "agree (2)", "never (1)", "rarely (2)", "neither agree nor disagree (3)", "sometimes (3)" were not processed in calculating positive percentages. In the degree of patient safety in the hospital unit, they were coded as "excellent (5)", "very good (4)", "good (3)", "fair (2)", and "poor (1)". Analyses were made by calculating the average.[17]

RESULTS

When the distribution of nurses based on their personal and professional characteristics was examined, it was observed that 33.6% (n=39) of the nurses were aged between 18-25 years and 30.2% (n=35) were aged between 26-33 years, 90.5% (n=115) were female, 54.3% (n=63) were married, 73.3% (n=85) were health vocational high school/associate degree graduates (Table 1). 31% (n=36) of the nurses had less than 5 years of professional experience and 28.4% (n=33) of them had a professional experience between 17-27 years, and 65.5% (n=76) of them had less than 5 years of working in the institution. 69.8% (n=81) of the nurses were working in shifts (mixed day and night). 57.8% (n=67) of the nurses worked overtime and 37.7% (n=23) worked an average of 10 hours in a month. 87.1% (n=101) of the nurses received patient safety training during their school education, 97.4% (n=113) of them received education in the institution, 43.1% (n=50) of the nurses reported that trainings in the hospital were conducted regularly each year, and 94.8% (n=110) of them reported that the training was adequate. All nurses were familiar with the patient safety reporting system established in the institution.

The nurses rated their unit for patient safety as follows: 44.8% (52) excellent, 47.4% (55) very good, and 0.9% (1) fair/poor. It was observed that the nurses rated their clinics/units as 3.66 points out of 5, and 73.2 points when converted to 100 points. When examining the number of "case reports" submitted by nurses to their administrators over the last year, it was observed that 47.4% (55) reported 1-2 cases but 37.9% (44) did not report any cases (Table 2).

When the effects of nurses' gender and marital status variables on their perception level of patient safety culture were examined, it was determined that while female nurses had higher perception levels than male nurses, married nurses had higher perception levels than single nurses, and there was a statistically significant difference between them ($p=0.046$, $p=0.043$, $p<0.05$) (Table 3).

TABLE 1: The distribution of nurses based on their personal and professional characteristics (n=116).

Descriptive characteristics		n	%
Age	18-25 years	39	**33.6**
	26-33 years	35	30.2
	34-41 years	25	21.6
	42 years and above	17	14.7
	Total	116	100
Gender	Female	115	**90.5**
	Male	11	9.5
	Total	116	100
Marital status	Single	53	45.7
	Married	63	**54.3**
	Total	116	100
Education level	Health vocational high school/Associate degree	85	**73.3**
	Bachelor's degree	23	19.8
	Master's degree and doctorate	8	6.9
	Total	116	100
Total duration of employment	<5 years	36	**31**
	6-16 years	36	**31**
	17-27 years	33	**28.4**
	>28 and above	11	9.5
	Total	116	100
Duration of working in the institution	<5 years	76	**65.5**
	6-10 years	5	4.3
	11-15 years	23	19.8
	>16 and above	12	10.3
	Total	116	100
Manner of work	Continuous daytime	35	30.2
	Shift (mixed night/day)	81	**69.8**
	Total	116	100
Do you work overtime?	Yes	67	**57.8**
	No	49	42.2
	Total	116	100
How many hours do you work overtime on average in a month?	0-10 hours	23	**37.7**
	11-20 hours	20	32.8
	21-40 hours	18	29.5
	Total	61	100
Were you trained for patient safety during your school years?	Yes	101	**87.1**
	No	15	12.9
	Total	116	100
Were you trained for patient safety in your institution?	Yes	113	**97.4**
	No	3	2.6
	Total	116	100
When have you been trained for patient safety in your institution?	When I first started work	24	20.7
	Regularly every year	50	**43.1**
	When required	1	0.9
	Regularly every year and when required	41	**35.3**
	Total	116	100
Is patient safety training sufficient?	Yes	110	**94.8**
	No	6	5.2
	Total	116	100
Department	Intensive care	32	27.5
	Inpatient clinics	60	51.8
	Emergency room	9	7.8
	Administrator(s)	5	4.3
	Outpatient clinics	10	8.6
	Total	116	100
Is there any reporting on patient safety in your institution?	Yes	116	**100**
	No	0	0
	Total	116	100

TABLE 2: Ratings of the nurses about their unit and their status of reporting on patient safety.

		n	%
Ratings of the unit	Excellent	52	**44.8**
	Very good	55	**47.4**
	Good	8	6.9
	Fair	1	0.9
	Total	116	100
Reporting on patient safety	None	44	37.9
	1-2 cases	55	**47.4**
	3-5 cases	14	12.1
	6-10 cases	5	1.7
	11-20 cases	1	0.9
	Total	116	100

When the effect of the nurses' age and education level variables on their perception level of patient safety culture was examined, it was found that the nurses aged between 34-41 had higher perception levels than other age groups, those with bachelor's degrees and above had higher perception levels than other education levels and there was a statistically significant difference between them (p=0.022, p=0.041) (Table 3).

When examining the effect of the variables of nurses' employment duration in the institution and manner of work on their perception level of patient safety culture; it was found that nurses who were working in the institution for 11 years or more and were working continuously during the day had higher perception levels and there was a statistically significant difference between them (p=0.046, p=0.020) (Table 3).

When examining the effect of duration of training held in the institution on nurses' perception level of patient safety culture, it was determined that trainings that were held regularly every year and when required increased the perception levels of the nurses as well as their awareness, and there was a statistically significant difference between them (p=0.000) (Table 3).

Nurses' perceptions on the patient safety culture were identified to be good, with 3.75±0.55 (75 out of 100), while patient safety ratings were excellent in 44.8% (n=52) and very good in 47.4% (n=55). While the highest percentage of positive responses (4.30±0.73) was identified for "feedback and communication about errors" among the 12 subscales under the hospital survey on patient safety culture, "staffing", on the other side, drew attention with the lowest positive response percentage (3.00±1.16) (Table 4).

A significant difference was determined between "Overall perceptions of safety" (p=0.012), "Frequency of event reporting" (p=0.042), "Teamwork across hospital units" (p=0.018), and "organizational learning and continuous improvement" (p=0.018), "Supervisor/manager expectations & actions promoting safety" (p=0.012), and "communication openness (p=0.016) among the subscales of the hospital survey on patient safety culture, and the scale total score and the departments. The administrators and the nurses working in inpatient clinics had higher perception levels on those subscales than those working in other clinics, and there was a statistically significant difference between them (Table 3).

A significant difference was identified between "Supervisor/manager expectations & actions promoting safety" (p=0.028), and "Hospital management support for patient safety" (p=0.031) among the subscales of the hospital survey on patient safety culture, and the scale total score and gender groups. Female nurses had higher perception levels on those subscales than male nurses and there was a statistically significant difference between them (Table 3).

A significant difference was identified between "Supervisor/manager expectations & actions promoting safety" (p=0.021), "Frequency of event reporting" (p=0.013), "feedback and communication about errors" (p=0.012), and "communication openness" (p=0.001) subscales, and the scale total score and marital status. Married nurses had higher perception levels on those subscales than single nurses and there was a statistically significant difference between them (Table 3).

A significant difference was identified between "Supervisor/manager expectations & actions promoting safety" (p=0.042), "Hospital Handoffs and transitions" (p=0.011), "organizational learning and continuous improvement" (p=0.015), and "commu-

TABLE 3: Factors affecting the scores of hospital survey on patient safety culture and its subscales by the nurses.

Variable	n	OPS (4) X̄±SD	FER (3) X̄±SD	TAHU (4) X̄±SD	HHT (4) X̄±SD	TWWU (4) X̄±SD	S (4) X̄±SD	OLCI (3) X̄±SD	NPRE (3) X̄±SD	SEAPS (4) X̄±SD	FCE (3) X̄±SD	CO (3) X̄±SD	HMSPS (3) X̄±SD	Scale total X̄±SD
Gender														
Female	105	3.79±0.97	4.18±1.00	3.11±0.68	3.98±0.86	4.13±1.12	3.03±0.59	3.84±1.08	3.47±1.05	3.73±0.75	4.34±0.70	3.94±0.84	3.85±0.85	3.78±0.54
Male	11	3.34±0.85	3.81±1.14	2.85±0.50	4.25±0.92	3.52±1.41	2.72±0.73	3.45±1.35	3.33±1.13	3.20±0.75	3.96±0.91	3.69±0.73	3.27±0.72	3.45±0.52
	116	t=1.482	t=1.129	t=1.228	t=-0.963	t=1.678	t=1.609	t=1.116	t=0.429	**t=2.229**	t=1.607	t=1.060	**t=2.181**	**t=1.927**
		p=0.141	p=0.261	p=0.222	p=0.338	p=0.096	p=0.110	p=0.267	p=0.669	**p=0.028**	p=0.111	p=0.308	**p=0.031**	**p=0.046**
Marital status														
Single	53	3.75±0.96	3.89±1.03	2.98±0.65	3.91±0.77	4.10±1.03	2.91±0.56	3.86±0.95	3.34±1.00	3.50±0.71	4.12±0.77	3.64±0.86	3.67±0.75	3.64±0.52
Married	63	3.75±0.98	4.35±0.95	3.17±0.67	4.08±0.95	4.05±1.27	3.08±0.63	3.76±1.24	3.56±1.10	3.83±0.78	4.46±0.66	4.15±0.74	3.91±0.93	3.85±0.55
	116	t=0.026	t=2.519	t=1.499	t=-1.258	t=0.242	t=1.568	t=0.447	t=1.094	**t=2.334**	**t=2.549**	**t=3.425**	t=1.486	**t=2.043**
		p=0.979	p=0.013	p=0.137	p=0.292	p=0.809	p=0.120	p=0.655	p=0.256	**p=0.021**	**p=0.012**	**p=0.001**	p=0.140	**p=0.043**
Education level														
Health vocational high school/Associate degree	85	3.70±1.05	4.13±1.00	3.06±0.67	4.15±0.72	3.96±1.26	3.06±0.59	3.63±1.17	3.49±1.02	3.58±0.74	4.27±0.70	3.84±0.81	3.74±0.87	3.72±0.53
Bachelor's degree	23	3.89±0.65	4.11±0.96	3.09±0.60	3.65±1.04	4.40±0.57	2.86±0.63	4.27±0.69	3.36±1.04	4.02±0.71	4.43±0.78	4.26±0.77	4.00±0.79	3.86±0.53
Master's degree and doctorate	8	3.84±0.87	4.33±1.39	3.30±0.77	3.50±1.31	4.34±1.23	2.81±0.65	4.37±0.93	3.41±1.54	3.84±0.97	4.20±0.97	3.79±1.12	3.87±0.85	3.80±0.74
Total	116	3.75±0.97	4.14±1.01	3.08±0.66	4.00±0.87	4.07±1.16	3.00±0.60	3.81±1.11	3.46±1.05	3.68±0.76	4.30±0.73	3.92±0.82	3.80±0.86	3.75±0.52
		X^2=0.363	X^2=0.148	X^2=0.436	**X^2=4.718**	X^2=1.489	X^2=1.344	**X^2=4.359**	X^2=0.147	**X^2=3.263**	X^2=0.479	**X^2=2.372**	X^2=0.850	**X^2=1.636**
		p=0.696	p=0.863	p=0.648	**p=0.011**	p=0.230	p=0.265	**p=0.015**	p=0.864	**p=0.042**	p=0.621	**p=0.048**	p=0.430	**p=0.041**
Manner of work														
Continuous daytime	53	3.68±0.99	4.49±0.90	3.23±0.69	3.92±1.00	4.28±1.12	3.03±0.58	3.87±1.15	3.67±0.98	4.05±0.84	4.73±0.52	4.20±0.67	4.03±0.90	3.93±0.54
Shift (mixed night/day)	63	3.78±0.96	3.99±1.03	3.02±0.65	4.04±0.81	3.99±1.18	2.99±0.62	3.78±1.10	3.37±1.07	3.53±0.68	4.11±0.73	3.80±0.87	3.70±0.82	3.67±0.53
	116	t=0.482	**t=0.801**	t=0.371	t=0.313	t=0.533	t=0.590	t=0.806	t=0.396	**t=3.501**	**t=4.467**	**t=2.457**	t=1.972	**t=2.363**
		p=0.631	**p=0.014**	p=0.176	p=0.482	p=0.213	p=0.736	p=0.676	p=0.154	**p=0.001**	**p=0.000**	**p=0.016**	p=0.051	**p=0.020**
Age														
18-25	39	3.79±0.95	3.94±0.95	3.00±0.54	4.10±0.64	4.07±0.96	2.88±0.50	3.71±0.89	3.35±0.95	3.48±0.62	4.14±0.67	3.68±0.79	3.66±0.77	3.65±0.47
26-33	35	3.69±1.08	4.28±0.99	3.22±0.63	4.08±0.94	3.92±1.36	3.12±0.65	3.57±1.26	3.45±0.97	3.69±0.80	4.28±0.75	4.01±0.70	3.91±0.82	3.77±0.51
34-41	25	3.85±0.91	4.47±0.96	3.28±0.72	4.13±0.79	4.20±1.28	3.07±0.69	4.17±1.19	3.89±1.23	3.93±0.84	4.48±0.71	4.18±0.92	3.94±0.99	3.96±0.65
42 years and above	17	3.63±0.89	3.82±1.14	2.72±0.78	3.41±1.15	4.22±1.02	2.95±0.59	3.98±1.03	3.07±1.04	3.79±0.80	4.45±0.79	3.90±0.96	3.66±0.90	3.63±0.57
Total	116	3.75±0.97	4.14±1.01	3.08±0.66	4.00±0.87	4.07±1.16	3.00±0.60	3.81±1.11	3.46±1.05	3.68±0.76	4.30±0.73	3.92±0.83	3.80±0.86	3.75±0.55
		X^2=0.234	X^2=2.248	**X^2=3.252**	**X^2=3.308**	X^2=0.361	X^2=1.067	X^2=1.671	X^2=2.332	X^2=1.27	X^2=1.333	X^2=2.104	X^2=0.893	**X^2=2.971**
		p=0.872	p=0.087	**p=0.024**	**p=0.023**	p=0.781	p=0.366	p=0.177	p=0.078	p=0.129	p=0.267	p=0.104	p=0.447	**p=0.022**
Duration of employment in the Institution														
< 5 years	76	3.70±0.94	4.01±0.99	2.97±0.63	4.09±0.75	3.92±1.18	3.01±0.56	3.59±1.05	3.41±0.96	3.57±0.76	4.12±0.74	3.72±0.77	3.69±0.90	3.65±0.53
6-10	5	3.65±1.23	4.53±0.86	3.28±0.98	4.05±1.30	4.15±1.63	2.90±0.76	4.13±1.75	3.06±1.83	3.85±0.78	4.86±0.29	4.26±1.16	3.40±0.43	3.84±0.69
11-15	23	4.04±0.92	4.44±1.05	3.38±0.60	3.84±0.93	4.44±0.96	2.89±0.74	4.27±0.98	3.46±1.17	3.89±0.68	4.52±0.66	4.23±0.87	4.13±0.70	3.96±0.51
16 years and above	12	3.56±1.11	4.25±1.04	3.16±0.72	3.77±1.25	4.35±1.12	3.22±0.55	4.13±1.16	3.94±1.01	3.95±0.89	4.80±0.45	4.44±0.60	4.02±0.81	3.97±0.56
Total	116	3.75±0.97	4.14±1.01	3.08±0.66	4.00±0.87	4.07±1.16	3.00±0.60	3.81±1.11	3.46±1.05	3.68±0.76	4.30±0.73	3.92±0.83	3.80±0.86	3.75±0.55
		X^2=928	X^2=1.415	**X^2=2.477**	X^2=0.787	X^2=1.469	X^2=0.859	**X^2=2.889**	X^2=1.121	X^2=1.712	**X^2=5.682**	**X^2=4.651**	X^2=2.236	**X^2=2.760**
		p=0.430	p=0.242	**p=0.045**	p=0.504	p=0.227	p=0.465	**p=0.039**	p=0.344	p=0.169	**p=0.001**	**p=0.004**	p=0.088	**p=0.046**

TABLE 3: Factors affecting the scores of hospital survey on patient safety culture and its subscales by the nurses *(continued)*.

Variable	n	OPS (4) X̄±SD	FER (3) X̄±SD	TAHU (4) X̄±SD	HHT (4) X̄±SD	TWWU (4) X̄±SD	S (4) X̄±SD	OLCI (3) X̄±SD	NPRE (3) X̄±SD	SEAPS (4) X̄±SD	FCE (3) X̄±SD	CO (3) X̄±SD	HMSPS (3) X̄±SD	Scale total X̄±SD
Are trainings sufficient?														
Yes	100	3.77±0.97	4.16±0.98	3.10±0.68	4.03±0.86	4.08±1.17	3.02±0.61	3.81±1.12	3.49±1.06	3.72±0.77	4.31±0.71	3.96±0.83	3.81±0.87	3.77±0.55
No	16	3.41±0.83	3.83±1.53	2.80±0.25	3.58±0.97	4.00±1.04	2.66±0.40	3.72±1.06	2.94±0.95	3.04±0.33	4.11±1.02	3.27±0.49	3.50±0.50	3.40±0.21
Total	116	t=0.867	t=0.774	t=1.090	t=1.227	t=0.171	t=1.409	t=0.195	t=1.233	**t=2.148**	t=0.661	**t=1.971**	t=0.884	**t=1.601**
		p=0.338	p=0.440	p=0.278	p=0.222	p=0.864	p=0.162	p=0.846	p=0.220	**p=0.002**	p=0.510	**p=0.017**	p=0.379	**p=0.006**
Time of training														
When I first started work	24	3.48±1.01	3.66±1.02	2.85±0.53	4.09±0.62	4.10±0.62	2.91±0.49	3.48±1.10	3.37±1.16	3.45±0.62	4.01±0.66	3.77±0.67	3.50±0.70	3.52±0.48
Every year. when required	41	3.83±1.06	4.61±0.91	3.40±0.64	4.05±1.30	4.06±0.92	3.09±0.69	4.20±1.24	3.70±1.15	3.88±0.75	4.69±0.58	4.32±0.86	4.04±0.89	4.01±0.53
Regularly every year	50	3.80±0.87	4.05±0.86	2.96±0.66	3.84±0.93	3.90±0.93	4.27±0.98	3.63±0.93	3.33±0.87	3.66±0.80	4.14±0.73	3.68±0.77	3.77±0.85	3.66±0.51
When required	1	1.00±0.97	1.00±0.97	2.40±0.66	3.77±1.25	4.75±0.87	4.13±1.16	4.00±1.11	1.67±1.05	2.50±0.76	3.00±0.73	3.00±0.83	2.67±0.86	2.96±0.55
Total	116	3.75±0.97	4.14±0.91	3.08±0.66	4.00±0.87	4.00±0.87	3.81±1.11	3.81±1.08	3.46±1.04	3.68±0.75	4.30±0.67	3.92±0.79	3.80±0.84	3.75±0.51
		X^2=0.750	**X^2=9.760**	**X^2=5.443**	X^2=0.606	X^2=1.677	X^2=0.725	**X^2=2.916**	X^2=2.023	X^2=2.522	**X^2=8.388**	**X^2=5.756**	**X^2=2.765**	**X^2=6.388**
		p=0.525	**p=0.000**	**p=0.002**	p=0.613	p=0.176	p=0.539	**p=0.037**	p=0.115	p=0.061	**p=0.000**	**p=0.001**	**p=0.045**	**p=0.000**
Department														
Intensive care	32	3.70±0.91	3.86±1.21	2.83±0.51	3.85±0.86	2.89±0.67	3.78±1.08	3.78±0.96	2.95±1.08	3.49±0.69	4.14±0.83	3.69±0.82	3.64±0.91	3.58±0.50
Inpatient clinics	60	3.87±0.90	4.20±0.82	3.16±0.71	4.12±0.74	3.03±0.67	3.86±0.69	3.86±1.08	3.67±0.96	3.80±0.73	4.31±0.67	4.02±0.83	3.95±0.84	3.84±0.53
Emergency room	9	3.02±0.96	3.85±1.33	3.06±0.59	4.05±0.86	3.22±0.68	3.02±0.68	3.37±1.41	3.59±1.09	3.16±0.80	4.00±0.86	3.33±0.57	3.33±0.81	3.47±0.54
Administrator	5	4.70±0.44	4.86±0.29	3.84±0.35	4.05±0.94	2.75±0.43	2.73±0.43	4.86±0.29	4.06±1.30	4.45±0.87	4.80±0.44	4.46±0.72	4.06±0.59	4.31±0.42
Outpatient clinics	10	3.35±1.27	4.60±1.05	3.08±0.70	3.72±1.47	3.12±0.69	3.02±0.69	3.46±1.46	3.36±0.94	3.70±0.77	4.76±0.44	4.30±0.77	3.70±0.80	3.74±0.56
Total	116	**X^2=3.384**	**X^2=2.055**	**X^2=3.126**	X^2=0.812	X^2=1.029	X^2=0.924	**X^2=3.117**	X^2=1.793	**X^2=3.390**	**X^2=2.446**	**X^2=3.186**	X^2=1.564	**X2=3.368**
		p=0.012	**p=0.042**	**p=0.018**	p=0.520	p=0.395	p=0.453	**p=0.018**	p=0.135	**p=0.012**	**p=0.051**	**p=0.016**	p=0.189	**p=0.012**

OPS: Overall Perceptions of Safety; FER: Frequency of event reporting; TAHU: Teamwork across hospital units; HHT: Hospital handoffs and transitions; TWWU: Teamwork within units; S: Staffing; OLCI: Organizational learning and continuous improvement; NPRE: Non-punitive response to error; SEAPS: Supervisor/manager expectations & actions promoting safety; FCE: Feedback and communication about errors; CO: Communication openness; HMSPS: Hospital management support for patient safety; SD: Standard deviation.

TABLE 4: Subscales of the hospital survey on patient safety culture mean score.

Subscales of the Hospital Survey on Patient Safety Culture	Mean score±SD
Overall Perceptions of Safety (4 items)	3.75±0.97
Frequency of event reporting (3 items)	4.14±1.01
Teamwork across hospital units (4 items)	3.08±0.66
Hospital handoffs and transitions (4 items)	4.00±0.87
Supervisor/manager expectations & actions promoting safety (4 items)	3.68±0.76
Organizational learning and continuous improvement (3 items)	3.81±1.11
Teamwork within units (4 items)	4.07±1.16
Communication openness (3 items)	3.92±0.83
Feedback and communication about errors (3 items)	**4.30±0.73**
Non-punitive response to error (3 items)	3.46±1.05
Staffing (4 items)	3.00±1.16
Hospital management support for patient safety (3 items)	3.80±0.86
Scale total	3.75±0.55

SD: Standard deviation.

nication openness" (p=0.048) subscales of the hospital survey on patient safety culture, and the scale total score and education levels. The nurses with bachelor's degrees and above had higher perception levels on those subscales than those with other education levels and there was a statistically significant difference between them (Table 3).

A significant difference was identified between "Supervisor/manager expectations & actions promoting safety" (p=0.001), "Frequency of event reporting" (p=0.014), "feedback and communication about errors" (p=0.000), and "communication openness" (p=0.016) subscales of the hospital survey on patient safety culture, and the scale total score and manner of work. The nurses who worked continuously daytime had higher perception levels on those subscales than those working in shifts and there was a statistically significant difference between them (Table 3).

A significant difference was identified between "Teamwork across hospital units" (p=0.024), and "Hospital Handoffs and transitions" (p=0.023) subscales of the hospital survey on patient safety culture and the scale total score and age variable. The nurses between the ages of 34-41 had higher perception levels on those subscales than those in other age groups, and there was a statistically significant difference between them (Table 3).

A significant difference was identified between "Teamwork across hospital units" (p=0.045), "organizational learning and continuous improvement" (p=0.039), "feedback and communication about errors" (p=0.001), and "communication openness" (p=0.004) subscales of the hospital survey on patient safety culture, and the scale total score and duration of employment in the institution. The nurses with professional seniority of 6 years and above had higher perception levels on those subscales and there was a statistically significant difference (Table 3).

A significant difference was identified between "Frequency of event reporting" (p=0.000), "Teamwork across hospital units" (p=0.002), "feedback and communication about errors" (p=0.000), "organizational learning and continuous improvement" (p=0.037), "Hospital management support for patient safety" (p=0.045) and "communication openness" (p=0.001), subscales the hospital survey on patient safety culture, and the scale total score and frequency of trainings. Trainings that were held every year and when required have raised awareness (Table 3).

DISCUSSION

Patient safety develops to enhanced protocols in case of errors, regularly assess patient safety in the hospitals, assess the situation, to hold trainings regularly and repeated when required, raise awareness by cre-

ating training plans, identify whether or not there are shortcomings in the majority of subjects by holding an exam before and after patient safety trainings, inform about these issues, and benchmark both internally and externally. This study, Öztürk et al. is similar to the study result; In order to ensure patient safety and to prevent/reduce errors, planned trainings for orientations are required, they emphasized that the planning of these trainings is important in the configuration of information and steam cycles. Alcan et al. it emerges for nurses' knowledge, attitude about patient safety and training programs for users. Çırpı et al. stated that nurses include information about patient safety and input, along with training programs to be held in both school and post-graduation professional work ceremonies.[18-20] Considering that the existing knowledge and equipment of girls in the post-graduation period are not sufficient and equal in the literature; It is emphasized that orientation trainings related to patient safety and in-service trainings with unit-based and field at certain intervals should be given to the newly started pictures in the construction of the health institution.[17,21,22]

This study shows that nurses think that they should have information about patient safety and that this information should be updated periodically. In the literature, it is emphasized that nurses should have the necessary knowledge and equipment regarding patient safety procedures/instructions, situations that put patient safety at risk, events that are reported or cause near misses, and measures to be taken to prevent/reduce errors.[17-28] It is emphasized that ensuring patient safety increases the quality of care given by nurses, ensures effective communication between healthcare team members and the patient, and reduces errors arising from communication.[21-24] Kır Biçer identified the primary cause of medical errors as lack of education about patient safety. Er and Altuntaş stated the reason for medical errors; high workload (75.6%) and long working hours (74.8%). Akgün Şahin and Kardaş Özdemir stated that 67% of the nurses encountered medical errors, and the most important reasons for the occurrence of errors were high workload, lack of personnel, non-duty work, stress and fatigue. Similarly, in some studies, it has been determined that errors that endanger patient safety are caused by inadequate or incomplete communication.[29-35]

CONCLUSION

It was concluded in this study that the perception levels of patient safety culture were higher in those who were female, aged 34-41 and had bachelor or higher degree, implying that patient safety was more important in these groups. Also, the nurses who were working in the institution for 11 years or more and continuously during the day had higher perception levels, and the trainings that were held regularly and when required increased the nurses' perception levels ($p<0.05$). As age and professional experience increased, so did one's perception levels of the patient safety culture. The nurses rated their clinics/units as 3.66 points out of 5, and 73.2 points when converted to 100 points.

SUGGESTIONS

It is recommended to include detailed patient safety issues in high school and associate degree education, keep the knowledge of nurses who work in the clinic up-to-date with in-service training throughout the working period, contribute to the development of patient safety culture by reducing individual allegations.

Source of Finance

During this study, no financial or spiritual support was received neither from any pharmaceutical company that has a direct connection with the research subject, nor from a company that provides or produces medical instruments and materials which may negatively affect the evaluation process of this study.

Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

This study is entirely author's own work and no other author contribution.

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