THE EFFECT OF NURSES' CULTURAL INTELLIGENCE LEVELS TOWARDS PATIENTS FROM DIFFERENT CULTURES ON PATIENT CARE BEHAVIORS[1]

HEMŞİRELERİN FARKLI KÜLTÜRDEN OLAN HASTALARA YÖNELİK KÜLTÜREL ZEKÂ DÜZEYLERİNİN HASTA BAKIM DAVRANIŞLARI ÜZERİNE ETKİSİ

Merve YAZAR[1], Berna BAYIR[2]
[1-2]KTO Karatay University, School of Health Sciences, Department of Nursing, Konya / Türkiye
ORCID NO: 0000-0001-5673-6103[1], 0000-0003-1304-7767[2]

Abstract: Aim: This study was conducted to examine the effect of nurses' cultural intelligence levels towards patients from different cultures on patient care behaviors.

Method: The population of the cross-sectional study, which is one of the analytical research types, consisted of Turkish citizen nurses over the age of 18 working in Konya. The research was collected by random sampling method, one of the non-probability sampling methods. Using the G*Power 3.1 package program, the sample size was determined as a minimum of 170 people for an effect size of 0.5, 95% confidence interval and 5% margin of error and 177 people were included. The sample of the study consisted of nurses who were actively working in Konya, had high school or higher education level, owned at least one technological device and could use internet networks. The research data were obtained with the Introductory Information Form, Cultural Intelligence Scale (CQS) and Caring Behaviours Scale-24 (CBI-24).

Results: It was determined that 80.2% of the nurses participating in the study were women, 48% were in the age range of 25-34 years, 86.4% had a university or higher education level. The mean total score of CBI-24 was 127.06±14.09 and the mean total score of CQS was 94.92±16.62. A significant difference was found between nurses' age, marital status, family type and origin and CQS total mean scores (p<0.05). There was a significant difference between the origins of the nurses and their CBI-24 total mean scores (p<0.05). There is a weak and positive relationship between nurses' mean CBI-24 scores and CQS scores (p<0.05).

Conclusion: As a result of the study, it was determined that the cultural intelligence level of nurses was at a good level and the level of caring behaviours was at a moderate level, and it was seen that as the level of cultural intelligence increased, caring behaviours also increased.

Keywords: Caring Behaviours, Nursing, Cultural Intelligence

Öz: Amaç: Bu araştırma hemşirelerin farklı kültürden olan hastalara yönelik kültürel zekâ düzeylerinin hasta bakım davranışları üzerine etkisini incelemek amacıyla gerçekleştirilmiştir.

Yöntem: Analitik araştırma türlerinden kesitsel tipte olan araştırmanın evrenini Konya'da çalışan 18 yaş üstü Türk vatandaşı olan hemşireler oluşturmuştur. Araştırma olasılıksız örnekleme yöntemlerinden gelişi güzel örnekleme yöntemiyle toplanmıştır. Örneklem büyüklüğü G*Power 3.1 paket programı kullanılarak, 0,5 etki büyüklüğü, %95 güven aralığı ve %5 hata payı için minimum 170 kişi olarak belirlenmiş ve 177 kişi dahil edilmiştir. Araştırmanın örneklemini Konya'da aktif olarak çalışan, lise ve üzeri eğitim düzeyine sahip, en az bir teknolojik cihaza sahip olan ve internet ağlarını kullanabilen hemşireler oluşturmuştur. Araştırma verileri Tanıtıcı Bilgi Formu, Kültürel Zekâ Ölçeği (CQS) ve Bakım Davranışları Ölçeği–24 (CBI-24) ile elde edilmiştir.

Bulgular: Araştırmaya katılan hemşirelerin %80.2'si kadın, %48'i 25-34 yaş aralığında % 86.4'ü üniversite veya üzeri eğitim düzeyine sahiptir. CBI-24 toplam puan ortalaması 127.06±14.09, CQS toplam puan ortalaması 94.92±16.62 olarak bulunmuştur. Hemşirelerin yaş, medeni durum, aile tipi ve köken ile CQS toplam puan ortalamaları arasında anlamlı farklılık tespit edilmiştir (p<0.05). Hemşirelerin kökenleri ile CBI-24 toplam puan ortalamaları arasında anlamlı düzeyde farklılık tespit edilmiştir (p<0.05). Hemşirelerin CBI-24 puan ortalamaları ile CQS puan ortalamaları arasında zayıf ve pozitif yönlü bir ilişki bulunmaktadır (p<0.05).

Sonuç: Araştırma sonucunda hemşirelerin kültürel zekâ düzeylerinin iyi düzeyde ve bakım davranışları düzeyinin orta düzeyde olduğu belirlenmiş, kültürel zekâ düzeyleri arttıkça bakım davranışlarının da arttığı görülmüştür.

Anahtar Kelimeler: Bakım Davranışları, Hemşirelik, Kültürel Zekâ

INTRODUCTION

Culture is a complex whole consisting of knowledge, beliefs, arts, traditions, habits, and skills that a person acquires from the society in which he/she lives and is the way of life of a society. Cultural values, attitudes, beliefs, and behaviors influence people's lifestyles and thus their health (Göl & Erkin, 2019). Increasing population mobility and globalization have resulted in people from different cultural backgrounds interacting and communicating more frequently (Kaya et al., 2021). In addition, advances in technology, migratory movements, ease of transportation, student exchange programs, and work opportunities abroad have effectively brought people from different cultures together (Gosse & Katic-Duffy, 2020; Verkuyten & Yogeeswaran, 2020). In this context, we come across the concepts of intercultural sensitivity and cultural intelligence, which we often hear about. Intercultural sensitivity can be defined as the ability to develop an understanding of, respect for, and appreciation of cultural differences (Kaya et al., 2021). Cultural intelligence, on the other hand, is defined as an individual's ability to function and manage effectively in culturally diverse environments that develop cultural sensitivity (Afsar et al., 2020). Cultural intelligence helps individuals to see from a broad perspective by better understanding their professional aspirations and perspectives, and to communicate effectively with culturally different individuals (Göl & Erkin, 2019). One study found that health professionals' generalizations and biases about individuals

prevent them from seeing their real issues, which affects treatment and care (Swiss Red Closs, 2018). The assumption that individuals are culturally equal has negative consequences and makes it impossible to achieve treatment and quality health care goals (Gungor et al., 2021). The failure of health care professionals to accept the culture of the individual, family, or community can lead to miscommunication, conflict with patients, health care disparities, discrimination, and stereotyping in health care settings (Gungor et al., 2021). To avoid these negative effects, nurses must recognize the patient's cultural values, beliefs, and traditions and incorporate them into appropriate patient-centered care planning (Osmancevic et al., 2021).

The care provided by nurses who do not take into account intercultural differences negatively affects both the patient and the nurse. In a study, it was observed that the inability of nurses to keep up with different cultures and the different language used by patients leads to negative consequences between nurse and patient communication and makes care difficult (Amiri & Heydari, 2017). In a study conducted in our country, 87.5% of nurses stated that they had difficulty communicating with people from different cultures and felt inadequate in intercultural nursing (Başli et al., 2018). In another study conducted with immigrants in Spain, participants stated that nurses did not take into account the differences in patients' eating and drinking habits and patients' treatment preferences and often applied the same treatment to patients. As a result,

participants indicated that they were not very satisfied with the care they received (Roure, 2021). As seen in the study results, the level of cultural competence and intelligence displayed by nurses is an important factor that enables them to provide effective and culturally compatible care (Osmancevic et al., 2021). As a result, the attitudes, sensitivity and values of the nurse, who is one of the main elements in the provision of health services, should also be multidimensional. This study was conducted to examine the effect of nurses' level of cultural intelligence toward patients from different cultures on patient care behaviors.

AIM

This study was conducted to examine the effect of nurses' cultural intelligence levels towards patients from different cultures on patient care behaviors.

Research Questions:

1. Do the sociodemographic variables of the nurses create a significant difference in the mean scores they obtained from the cultural intelligence scale?

2. Do the sociodemographic variables of the nurses create a significant difference in the mean scores of the care behaviours scale?

3. Is there a significant relationship between nurses' cultural intelligence levels and care behaviours?

MATERIAL AND METHOD

This study is a cross-sectional quantitative research of analytical research types. The research was conducted between 31.03.2023-25.06.2023 through social media to nurses working in Konya. The research population consisted of nurses over the age of 18 who are Turkish nationals working in Konya. Since this research is a research conducted to determine the level of culture, nurses should show similar cultural characteristics. Therefore, only Turkish nurses were included in the population. The study was collected by random sampling method, one of the non-probability sampling methods. The sample for the study was made up of all the nurses who could be reached using the random sampling method. G*Power 3.1 package programme was used in the sample calculation of the study. Erenoğlu et al. (2019) "Nursing Care Behaviours and Factors Related to Care Behaviours; Maternity Home Sample", based on the 'Care Behaviours Scale-24' score in the study titled 'Nursing Care Behaviours Scale-24', the sample size was determined as a minimum of 170 people for an effect size of 0.5, 95% confidence interval and 5% error margin, and 177 people were included.

Inclusion Criteria:

- Volunteering to participate in the research

- High school and above education level

- Working actively in Konya (sampled from 3 different hospitals)

- To have at least one technological device and to be able to use internet networks

Nurses working in areas such as outpatient clinics, blood collection, patient reception, who cannot be in active communication with patients due to their duties, and who come to

Turkey from other countries to work were not included in the study. In the collection of data, verbal consent was first obtained by contacting by phone, and then the link created through Google forms to reduce the carbon footprint was sent to the participants via social media (WhatsApp).

Data Collection Form

The data of the research were collected with Identification Information Form, Cultural İntelligence Scale (CQS) and Caring Behaviors Inventory-24 (CBI-24).

Identification Information Form: The descriptive information form consists of 15 questions to determine the sociodemographic characteristics (age, gender, educational status, marital status), cultural levels (origin, mother tongue, reasons for choosing nursing, etc.) of the nurses participating in the study (Göl & Erkin 2019; Skaria & Montayre, 2023).

Cultural Intelligence Scale (CQS): Ang et al. (2007) developed this scale. İlhan and Çetin conducted the Turkish validity and reliability study in 2011. The original scale, which consists of a total of twenty items, consists of four sub-dimensions as "metacognitive" (4 items = 1, 2, 3, 4), "cognitive" (6 items = 5, 6, 7, 8, 9, 10), "motivational" (5 items = 11, 12, 13, 14, 15) and "behavioural" (5 items = 16.17.18.19.20). A minimum of 20 points and a maximum of 100 points can be obtained from the scale. High score represents high cultural intelligence level. There is no reverse coding. Cronbach's alpha for the Turkish form of the scale was .758. The Cronbach's alpha reliability coefficient was .885 in this study.

Caring Behaviors Inventory-24 (CBI-24): The scale, whose original name is Caring Behaviors Inventory and called Care Behaviours Scale in Turkish, was developed by Zane Robinson Wolf and colleagues in 1994 to study patient care from philosophical and ethical perspectives (Wolf et al., 1994). Kurşun and Kanan conducted the Turkish validity and reliability study of the scale. (2012). The scale has been developed to assess nursing care (Kurşun & Kanan, 2012). It consists of 24 items and 4 sub-dimensions measured on a 6-point Likert scale. These sub-dimensions are respectfulness (6 items=1, 3, 5, 6, 13, 19), assurance (8 items=16, 17, 18, 20, 21, 22, 23, 24), commitment (5 items=2, 4, 7, 8, 14), knowledge-skill (5 items=9, 10, 11, 12, 15). There is no reverse coding. The response scores given to the scale are minimum 1 and maximum 6 points for each item. The minimum score is 42 and the maximum score is 252. The higher the score, the more favourable the patients' or nurses' perception of care. Cronbach' alpha of Turkish form of scale was calculated to be .96. A Cronbach alpha reliability coefficient of .95 was found in this research.

Data Analysis

Data analysis was performed in SPPS 25. The distributions of the data groups were analysed and the means, standard deviations, quartile widths, normal distribution and histograms of the groups were obtained. In the comparison of independent groups with measured data; Student's t test and analysis of variance (further analysis Tukey HSD) were applied if parametric test data were

provided Kruskall Wallis H test (Dunnett's C) with Bonferoni correction were applied if non-parametric test data were provided. In addition, Spearman Correlation Analysis was applied to determine whether there is a relationship between two or more variables. The significance level was set as p<.05 for all analysis results.

Ethical Consideration

Permission was obtained from KTO Karatay University Pharmaceutical and Non-Medical Device Research Ethics Committee for the conduct of the research (2023/038). Participants were informed that voluntariness was essential and that they could leave the study at any time.

RESULTS

In our study, the mean total score of the cultural intelligence scale was 94.92±16.62 and the mean total score of the caring behaviours scale was 127.06±14.09. The distribution of the findings related to the sociodemographic and occupational characteristics of the nurses is given in Table 1. 80.2% of the nurses were women, 48% were between the ages of 25-34 years, and 86.4% had a university or higher education level. 66.7% of the nurses were single, 97.2% lived in the city centre, 84.2% were of Turkish origin, 50.8% were from Konya, 91.5% spoke Turkish as their mother tongue and 72.9% became nurses willingly. The idea that the patient's culture should be known in nursing care was supported by 78%. In addition, it was determined that 93.8% provided care to people from different cultures in the clinics where they worked, 67.8% lived in a region where people from different cultures lived and 53.1% lived in Konya for the longest time (Table 1).

Table 1. Distribution of Findings Related to Sociodemographic and Professional Characteristics of Nurses (n=177)

	n	%
Gender		
Female	142	80.2
Male	35	19.8
Age		
18-24 age	58	32.8
25-34 age	85	48
35-44 age	21	11.9
45+ age	13	7.3
Education level		
High school graduate	24	13.6
University graduate or higher	153	86.4
Marital status		
Married	59	33.3
Single	118	66.7
Place of residence		
City centre	172	97.2
Off-centre	5	2.8
Family Type		
Nuclear family	146	82.5
Extended family	25	14.1
Divorced	6	3.4
Hometown		

Konya	90	50.8
Ankara	7	4
Hatay	7	4
Mersin	6	3.4
Adana	5	2.8
Other	62	35
Origin		
Turkish	149	84.2
Kurdish	22	12.4
Arab	4	2.3
Other	2	1.1
Mother tongue		
Turkish	162	91.5
Kurdish	12	6.8
Arabic	3	1.7
Nursing preference status		
Willingly	129	72.9
Unintentionally	48	27.1
Should the patient's culture be known in nursing care?		
Yes	138	78
No	39	22
Have you cared for someone from a different culture in your clinic?		
Yes	166	93.8
No	11	6.2
Do you have neighbours from different cultures in the area where you live?		
Yes	120	67.8
No	57	32.2
Longest lived in		
Konya	94	53.1
Kayseri	20	11.3
İstanbul	9	5.1
Ankara	8	4.5
Aksaray	5	2.8
Other	41	23.2

Summary statistics are given as Number (Percentage) values.

Table 2. Distribution of Scores on the CQS and CBI-24 Scales for Nurses (n=177)

		Ort±SS	Min/Maks
CQS	**Total Score**	94.42±16.62	47/140
	Metacognitive	22.41±3.95	8/28
	Cognitive	23.89±7.44	7/42
	Motivational	22.75±6.08	5/35
	Behavioural	25.85±5.63	10/35
CBI-24	**Total Score**	127.06±14.09	71/144
	Being Respectful	31.70±3.87	17/36
	Assurance	41.97±5.11	28/48
	Commitment	25.88±3.42	13/30
	Knowledge and Skills	27.50±3.06	13/30

Summary statistics are given as mean ± standard; minimum and maximum, values.

Nurses' CQS sub-dimension total mean scores were as follows: metacognitive sub-dimension mean score 22.41±3.95, cognitive sub-dimension mean score 23.89±7.44, motivational sub-dimension mean score 22.75±6.08, behavioural sub-dimension mean score 25.85±5.63. The total mean scores of the CBI-24 sub-dimensions were as

follows: respectfulness sub-dimension mean score 31.70±3.87, assurance sub-dimension mean score 41.97±5.11, commitment sub-

dimension mean score 25.88±3.42 and knowledge and skills sub-dimension mean score 27.50±3.06 (Table 2).

Table 3. Comparison of the Mean Scores of Cultural Intelligence Scale and Caring Behaviours Scale with Sociodemographic and Occupational Characteristics of Nurses (n=177)

	CQS Ort±SS	Test	CBI-24 Ort±SS/ Mean Rank	Test
Gender				
Female	94.44±16.60	t=-0.768	127.29±12.88	t=0.359
Male	96.85±18.69	p=0.443	126.11±18.38	p=0.721
Age				
18-24[a]	97.10±17.71	F=5.749	128.75±15.06/ 97.13*	KW=6.467
25-34[b]	97.51±13.47	**p=0.001**	124.40±14.66/ 78.91*	p=0.091
35-44[c]	84.23±19.93	(a>c, b>c)	131.23±8.3/ 101.38*	
45+[d]	85.46±16.17		130.15±10.47/98.69*	
Education level				
High school graduate	98.87±17.53	t=1.255	131.12±12.27	t=1.525
University graduate or higher	94.30±16.45	p=0.211	126.42±14.28	p=0.129
Marital status				
Married	87.66± 17.53	t=-4.085	128.71±11.65	t=1.201
Single	98.55±14.94	**p=0.000**	126.23±15.14	p=0.272
Place of residence				
City centre	94.57±16.51	t=-1.629	126.80±14.15	t=-1.443
Off-centre	106.80±17.85	p=0.105	136±8.71	p=0.151
Family Type				
Nuclear family[a]	93.28±15.89	F=4.168	126.67±13.99	F=0.577
Extended family[b]	102.60±19.34	**p=0.017**	127.96±15.67	p=0.563
Divorced[c]	102.66±12.43	(b>a)	132.66±9.26	
Hometown				
Konya	94.46±16.89	F=1.632	126.88±14.88	F=0.858
Ankara	95.14±20.11	p=0.154	123.85±16.68	p=0.511
Hatay	111.00±7.83		136.28±10.62	
Mersin	99.83±9.86		126.66±13.76	
Adana	89.40±13.01		121.00±11.59	
Other	93.73±16.71		127.15±13.18	
Origin				
Turkish	93.30 ± 16.69 / 84.01*[a]	KW=11.577	127.38± 14.00/ 90.20*[a]	KW=9.791
Kurdish	101.27±12.64/ 108.93*[b]	**p=0.009**	121.40 ± 14.01/ 67.13*[b]	**p=0.020**
Arab	114.75± 7.76 / 154.13*[c]	(b>a)	140.50± 3.87/ 140.50*[c]	(a>b, c>b)
Other	105.50 ± 27.57 / 111.00*[d]		138.50 ± 7.77/ 135.75*[d]	
Mother tongue				
Turkish	94.17±16.69	F=2.376	127.15±14.30	F=1.109
Kurdish	101.66±12.69	p=0.072	122.91±11.07	p=0.347
Arabic	119.50±6.36		141.50±0.70	
Nursing preference status				
Willingly	94.82±17.11	t=-0.120	126.84±14.69	t=-3.335
Unintentionally	95.16±15.40	0.905	127.64±12.44	p=0.738
Should the patient's culture be known in nursing care?				
Yes	95.07±16.40	t=0.238	126.37±14.49	t=-1.219
No	94.35±17.58	p=0.812	129.48±12.44	p=0.189
Have you cared for someone from a different culture in your clinic?				
Yes	95.25±16.61	t=1.033	127.00±14.20	t=-0.227
No	89.90±16.62	p=0.303	128.00±19.90	p=0.820
Do you have neighbours from different cultures in the area where you live?				
Yes	96.35±17.16	t=1.678	126.35±15.13	t=-1.071
No	91.89±15.13	p=0.095	128.56±11.58	p=0.286
Longest lived in				
Konya	93.92±17.17	F=1.404	127.54 ± 14.22 / 90.92*	KW=10.018

Kayseri	98.05±13.20	p=0.225	121.75 ± 15.35 / 69.60*	p=0.075
İstanbul	100.44±12.85		135.33 ± 11.18 / 121.94*	
Ankara	89.75±19.76		126.25 ± 14.03 / 85.94*	
Aksaray	109.60±11.14		135.60 ±16.56 / 126.00*	
Other	93.66±16.89		125.85 ± 12.70 / 82.50*	

t: Independent groups t-test, F: One-way analysis of variance in independent groups (further analysis Tukey HSD), KW: Kruskall Wallis H test (further analysis Dunnett's C) * Non-normally distributed cases are included in the table, p: Test significance value

While a significance relationship was found between the nurses' age, marital status, family type and origin and the mean total score of the cultural intelligence scale (p<0.05), no significant relationship was found between gender, educational status, place of residence, hometown, mother tongue, nursing preference status, knowledge of the patient's culture in nursing care, experience of caring for patients from different cultures in the clinic, contact with people from different cultures in the area where they live and the city where they have lived the longest (p>0.05). It was determined that the mean scores of the cultural intelligence scale of nurses in the 18-24 age group were significantly higher than those in the 35-44 age group (a>c, p<0.05), and the mean scores of the cultural intelligence scale of nurses in the 25-34 age group were significantly higher than those in the 35-44 age group (b>c, p=0.004). In the subsequent analysis, it was found that the mean scores on the cultural intelligence scale of nurses with an extended family type were considerably greater than those of nurses with a nuclear family type (p<0.05). In the further analysis, it

was determined that the mean score of the cultural intelligence scale of nurses with Kurdish origin was significantly higher than those with Turkish origin (p<0.05) (Table 3).

A consistent difference was found between nurses' origins and overall mean scores on the caring behaviours scale (p<0.05). In the further analysis, it was determined that the mean scores of the care behaviors scale of the participants with Turkish origin were significantly higher than those with Kurdish origin (p<0.05), and the mean scores of the care behaviors scale of the participants with Arab origin were significantly higher than those with Kurdish origin (p<0.05).

No significant difference was found between the total mean scores of the caring behaviour scale and gender, age, educational status, marital status, place of residence, hometown, family type, mother tongue, nursing preference status, knowing the patient's culture in nursing care, experience of caring for patients from different cultures in the clinic, being in contact with people from different cultures in the living area and the longest lived city (p>0.05) (Table 3).

Table 4. The Relationship Between Nurses' Scores from CQS and CBI-24 Scales (n= 177)

CBI-24		CQS				
		Total Score	Metacognitive	Cognitive	Motivational	Behavioural
Total Score	r	0.292	0.446	0.082	0.176	0.251
	p	0.000**	0.000**	0.279	0.019	0.001**
BeiRespectful	r	0.307	0.449	0.100	0.171	0.275
	p	0.000**	0.000**	0.185	0.023*	0.000**
Assurance	r	0.283	0.383	0.100	0.188	0.232

	p	0.000**	0.000**	0.187	0.012*	0.002***
Commitment	r	0.292	0.391	0.136	0.173	0.275
	p	0.000**	0.000**	0.072	0.021*	0.000**
Knowledge	r	0.157	0.408	-0.068	0.086	0.174
and Skills	p	0.037**	0.000**	0.366	0.258	0.020*

Spearman Correlation analysis was used. *p<0.05; **p<0.01, r=Correlation Coefficient

The relationship between the scores obtained from the Cultural Intelligence and Care Behaviours Scales is shown in Table 4. The relationship between the total score of the Care Behaviours Scale and the total score of the Cultural Intelligence Scale is weak, the relationship between the CBI-24 respectfulness, assurance, commitment sub-dimension and the CQS total score average is weak, the relationship between the CBI-24 knowledge skill sub-dimension and the CQS total score average is very weak, the relationship between the CQS metacognitive sub-dimension and the CBI-24 respectfulness, assurance, A weak positive correlation was found between CQS motivational sub-dimension and CBI-24 total score and its sub-dimensions, a very weak positive correlation was found between CQS behavioural sub-dimension and CBI-24 total score, assurance, knowledge skill sub-dimension, and a weak positive correlation was found with respectfulness and commitment sub-dimensions (p<0.05). On the other hand, a high correlation was found between CQS cognitive sub-dimension and CBI-24 total score, a very high correlation with respectfulness sub-dimension and assurance sub-dimension, and a negative moderate non-significant correlation with CBI-24 knowledge skill sub-dimension (p>0.05) (Table 4).

DISCUSSION

The study was conducted to examine the effect of nurses' level of cultural intelligence toward patients from different cultures on patient care behaviors. The study found that the mean CQS total score of the nurses was 94.92±16.62 and the highest score among the sub-dimensions was in the behavioral sub-dimension. Individuals with high cultural intelligence have the behavior of adapting to differences more easily and communicating with individuals from different cultures more easily. It is necessary to be willing and patient to have cultural intelligence and to develop this intelligence (Aslan & Kizir, 2019). Kant and Ünal (2017), in their study, determined the mean CQS score of nurses to be 90.79±18.70. In Durna and Altay (2023), it was determined that the mean CQS score of nurses was 40.00±9.180 and the highest score among the sub-dimensions was in the cognitive sub-dimension. In the study of Aslan and Kizir (2019), it was found that the mean CQS score of nurses was 99.02 and the highest score among the sub-dimensions was in the behavioral and motivational sub-dimension. The fact that the level of cultural intelligence in our study is higher than the studies in the literature suggests that the fact that the majority of nurses participating in the study have undergraduate and graduate education and that all universities today have masses of students from different countries, ethnic groups, and cultural traditions and that

concepts such as culture and intercultural nursing are included in the course content may be effective. In our study, the mean score of the caring behaviors scale was 127.06±14.09, and the caring behaviors were found to be at a moderate level. When the mean scores of the sub-dimensions of the scale were compared in the study, it was found that the highest score was in the assurance dimension. The World Health Organization (WHO) states that trust is the most important factor in providing quality healthcare services to patients (WHO, 2019). Trust is an important issue in the nurse-patient relationship, as the patient is in a vulnerable position due to changes in health status and general functioning. Trust improves care and helps to reduce the patient's stress level. Gül and Arslan (2021) found that the mean score of the caring behavior scale in their study was 150.79±21.81, and the mean score was lower than in our study. The fact that the mean scores of nurses' caring behaviors were at a medium level suggests that some of the nurses have some qualities that can be developed in terms of caring behaviors, while others do not.

In our study, when the cultural intelligence level of nurses was examined according to the age factor, it was found that the mean cultural intelligence scale scores of nurses in the age group of 18-24 years were significantly higher than those in the age group of 35-44 years, and the mean cultural intelligence scale scores of nurses in the age group of 25-34 years were significantly higher than those in the age group of 35-44 years. In the studies of İşçi et al. (2013) and Aksoy (2012), it was found that there was no significant difference between age and the total score and subdimensions of the cultural intelligence scale. Recently, the inclusion of the concepts of culture, intercultural nursing, and awareness in the nursing curriculum from the 1st year may be effective in the high mean scores of the cultural intelligence scale of nurses in the young population. In the study, no significant difference was found between the groups in the evaluation of the mean scores of the nurses' caring behavior scale according to age. Similar to our study, Erenoğlu et al. (2019) found that age was not an effective factor on care behavior. Çolak Okumuş and Uğur (2017) found that with increasing age of nurses, there was an increase in the scores of the knowledge skills subdimension of the care behavior scale. The results of the study suggest that it may be more important for nurses to have the necessary knowledge and skills and professional competence in caring behaviors than sociodemographic characteristics.

In the study, the mean cultural intelligence score of single individuals was significantly higher than that of married individuals. When the mean scores of the nurses' caring behavior scale were evaluated according to marital status, no significant difference was found between the two groups. Similar to our study, Gül and Dinç (2018) and Erenoğlu et al. (2019) reported that there was no significant difference between the care behavior scores of married and single nurses. Although there are no studies in the literature comparing marital status and cultural intelligence, the

fact that single individuals have fewer responsibilities than married individuals with children suggests that they may have more effective time to develop their cultural intelligence skills.

In the study, when the mean cultural intelligence scores of nurses were examined according to their family types, it was found that the mean scores of the cultural intelligence scale of nurses with extended family type were significantly higher than those of nurses with nuclear family type. Tahnal (2017), in his study with healthcare professionals, stated that factors such as the number of people in the family and who they live with at home do not affect the cultural intelligence scores of healthcare professionals (Tahnal, 2017). Our research findings are not similar to the literature, suggesting that the high cultural intelligence scores of nurses living in extended families may be due to living in a multicultural environment with more than one generation.

In the study, when the origin of nurses and their mean scores of cultural intelligence were analyzed, it was found that the mean scores of nurses of Kurdish origin were significantly higher than those of nurses of Turkish origin. In a study conducted with university students, no difference was found between ethnic origin and the mean score of the cultural intelligence scale (Wang et al., 2021). Our research result is not similar to the literature and suggests that the development and improvement of cultural intelligence may be influenced by many factors such as personality traits, intercultural communication, and the ability to see things

from a broad perspective. When the mean scores of nurses' origin and caring behaviors were examined in the study, it was found that the mean scores of the caring behaviors scale of nurses of Turkish origin were significantly higher than those of nurses of Kurdish origin, and the mean scores of the caring behaviors scale of nurses of Arab origin were significantly higher than those of nurses of Kurdish origin. There is no study in the literature that examines the effect of nurses' origin on nursing behaviors. However, based on the fact that quality nursing care is related to nurses' professional knowledge and skills and personality traits, it is assumed that nurses of Turkish and Arab origin will have higher mean scores by improving themselves in these areas.

In the study, the mean cultural intelligence score of male nurses was higher than that of female nurses. However, the difference was not statistically significant. Güngör et al. (2023) investigated the cultural intelligence level of students studying in the field of health and found that the intelligence level of male students was higher than that of female students (Güngör et al., 2023). In support of our research findings, Abaslı and Polat (2019), Uludağ and Deveci (2018) found that the cultural intelligence level of males was higher. There is also a study in the literature that gender does not affect the level of cultural intelligence (Okuyan, 2019). Gender roles and societal expectations may direct males towards certain cultural skills, which may lead to higher performance of males in these skills. From this perspective, the higher cultural intelligence scores of male nurses can

be seen as a finding that reflects gender differences. In our study, no significant difference was found between the two groups in the evaluation of the nurses' mean scores on the caring behavior scale according to gender. Other studies in the literature have stated that gender does not affect care behavior (Erenoğlu et al., 2019; Dığın & Kızılcık Özkan, 2021; Trinidad et al., 2019). The results of the study are similar to the literature and suggest that caregiving behaviors do not differ by gender and that nurses care about caregiving regardless of gender.

The study found that as nurses' levels of cultural intelligence increased, so did their caring behaviors. There is no study in the literature to determine the relationship between cultural intelligence and caring behaviors. Cultural intelligence is a characteristic that develops and promotes cultural sensitivity. It has emerged with globalization and is generally defined as a person's ability to adapt to different cultures and effectively manage interactions with different cultures (Göl & Erkin, 2019). Cultural intelligence helps individuals to better understand and cope with professional demands and perspectives, and to build strong relationships with culturally diverse individuals (Wang et al., 2021). In this context, nurses' ability to identify cultural differences, intercultural communication, and view events from a broad perspective, improve their foreign language skills, and increase their level of cultural intelligence will have a positive impact on their nursing behaviors.

Limitations of the Study

The limitation of the study is that the results are valid only for the participants who participated in the study, it was conducted in a single province and cannot be generalised to all nurses.

CONCLUSION

This study was conducted to examine the effect of nurses' cultural intelligence levels towards patients from different cultures on patient care behaviors. The results of the research showed that the nurses' cultural intelligence scores were at a good level and their caring behaviours were at a moderate level, and as their cultural intelligence scores increased, so did their caring behaviours. This suggests that nurses can better understand the behaviours and attitudes of patients with intercultural differences and that they have a level of cultural intelligence and care behaviours that can contribute to the effectiveness, quality and efficiency of care. It was determined that the cultural intelligence levels of nurses aged 25-34, single, with a large family type and of Kurdish origin were significantly higher, and the care behaviors of nurses of Turkish and Arab origin were significantly higher. In hospitals and health care institutions, it is recommended to increase the level of cultural intelligence of nurses by increasing cooperation between nurses from different cultures by using each other's experiences and different cultural perspectives, by providing opportunities to experience care behaviours in different cultures by observing them live, and by investigating other potential factors that

influence the cultural intelligence of nurses and care behaviours.

Conflict of Interest: The authors declare that they have no known competing financial interests or personal relationships that could influence the work reported in this article.

Author Note: Our research was presented as an oral presentation at the 7th International Nursing and Innovation Congress.

REFERENCES

Abaslı, K., & Polat, Ş. (2019). The Examination of Students' Views on Intercultural Sensitivity and Cultural Intelligence. *Anemon Muş Alparslan University Journal of Social Sciences*, *7*(1), 193–202. https://doi.org/10.18506/anemon.419526

Afsar, B., Al-Ghazali, B. M., Cheema, S., & Javed, F. (2020). Cultural intelligence and innovative work behavior: the role of work engagement and interpersonal trust. *European Journal of Innovation Management, 24*(4), 1082-1109.

Aksoy, Z. (2012). The key to success in intercultural communication and management: cultural intelligence. *New communication technologies and social transformation*. II. International Communication Symposium, Kyrgyzstan-Turkey Manas University.

Amiri, R., & Heydari, A. (2017). Nurses' experiences of caring for patients with different cultures in Mashhad. Iran. *Iranian Journal of Nursing and Midwifery Research*, *22*(3), 232-236. https://doi.org/10.4103/1735-9066.208156

Ang, S., Van Dyne, L., Koh, C., Yee Ng, K., Templer, K. J., Tay, C., & Chandrasekar, N. A. (2007). Cultural intelligence: Its measurement and effects on cultural judgment and decision making, cultural adaptation and task performance. *Management and Organization Review*, *3*(3), 335–371. https://doi.org/10.1111/j.1740-8784.2007.00082.x

Başli, M., Bekar, M., & Civelek. İ. (2018). Understanding the models used in intercultural nursing and "cultural competence process model". *Journal of Necmettin Erbakan University Faculty of Health Sciences, 3*(1), 18-24.

Çolak Okumuş, D., & Uğur, E. (2017). The effects of nurses' emotıonal ıntellıgence levels on theır carıng behavıors. *Acıbadem University Journal of Health Sciences, 2*, 104-109.

Dığın, F., & Kızılcık Özkan, Z. (2021). Determination of nursing students' perceptions of care behavior. *Gevher Nesibe J Med Health Sci, 6*(10), 16-21.

Durna, N., & Altay, B. (2023). The effect of nurse's cultural ıntellıgence on ıntercultural sensıtıvıtıes: ıntensıve care example (cultural skills of nurses*). Journal of Research and Development in Nursing, 25*(1-2), 21-34.

Erenoğlu, R., Can, R., & Tambağ, H. (2019). Nursing Care Behaviors and Factors Related to Care Behaviors; Maternity Hospital. *Health and Society, 29*(1), 79-88.

Gosse, N. L., & Katic-Duffy, A. (2020). Nursing student and faculty perceptions of reciprocity during international clinical learning experiences: A qualitative descriptive study. *Nurse Education Today, 84*, 104242. https://doi.org/10.1016/j.nedt.2019.104242

Göl, İ., & Erkin, Ö. (2019). Association between cultural intelligence and cultural sensitivity in nursing students: A cross-sectional descriptive study. *Collegian*, *26*(4), 485-491.

https://doi.org/10.1016/j.colegn.2018.12.007

Gungor, S., Tosun, B., & Prosen, M. (2021). The relationship between intercultural effectiveness and intercultural awareness and xenophobia among undergraduate nursing and vocational schools of health services students: A descriptive study. *Nurse Education Today*, *107*, 105104.

Gül, Ş., & Arslan, S. (2021). Determining the Perceptions of Nursing Care Behaviors of Students Studying in Nursing Department. *Acıbadem University Health Sciences Journal, 12*(2), 432- https://doi.org/10.31067/acusaglik.852191

Gül, Ş., & Dinç, L. (2018). Investigation of nurses' and patients' perceptions regarding nursing care. *Journal of Hacettepe University Faculty of Nursing*, *5*(3), 192-208.

İlhan, M., & Çetin, B. (2014). Validity and Reliability Study of the Turkish Version of the Cultural Intelligence Scale. *H. U. Journal of Education*, *29*(2), 94-114.

İşçi. E., Söylemez, Ö., & Kaptanoğlu Yıldırım, A. (2013). A research conducted to determine cultural intelligence level in hospital managemen. Kafkas *University Journal of Economics and Business Administration*, *4*(5), 1-18.

Kant, E., & Sevgi Ünal, K. (2017). The effect of cultural intelligence on individualised care in nurses. *Journal of Human Sciences*, *14*(4), 113-118.

Kaya, Y., Arslan, S., Erbaş, A., Yaşar, B. N., & Küçükkelepçe, G. E. (2021). The effect of ethnocentrism and moral sensitivity on intercultural sensitivity in nursing students, descriptive cross-sectional research study. *Nurse Education Today*, *100*, 104867.

Kurşun, Ş., & Kanan, N. (2012). Validity and reliability study of the Turkish form of the care behaviours scale 24. *Anatolian Journal of Nursing and Health Sciences*, *15*, 229-35.

Okuyan, C. B. (2019). Determination of ıntercultural sensitivity of nursing students: a university example. *Journal of Research and Development in Nursing, 20*(1-2), 47-54.

Osmancevic, S., Schoberer, D., Lohrmann, C., & Großschädl, F. (2021). Psychometric properties of instruments used to measure the cultural competence of nurses: a systematic review. *International Journal of Nursing Studies*, *113*, 103789.

Ramos-Roure, F., Feijoo-Cid, M., Manresa-Dominguez, J. M., Segura-Bernal, J., García-Sierra, R., Fernández-Cano, M. I., & Toran-Monserrat, P. (2021). Intercultural communication between long-stay immigrants and Catalan primary care nurses: A qualitative approach to rebalancing power. *International Journal of Environmental Research and Public Health*, *18*(6), 2851.

Skaria, R., & Montayre, J. (2023). Cultural intelligence and intercultural effectiveness among nurse educators: A mixed-method study. *Nurse Education Today*, *121*, 105714. https://doi.org/10.1016/j.nedt.2023.105714

Swiss Red Cross. (2018). Transkulturelle kompetenz - professioneller umgang mit vielfalt retrieved from. https://www.redcross.ch/de/soziale-integration/migration/professioneller-umgang-mit-vielfalt.

Tahnal, Z. (2017). *Investigation of cultural ıntelligence levels in healthcare workers according to sociodemographic variables* [Master Thesis, Istanbul Esenyurt University]. Institute of Social Sciences,

Department of Business Administration, Hospital and Health Institution. Admin Science.

Trinidad, M. F., Pascual, J. L. G., & García, M. R. (2019). Perception of caring among nursing students: Results from a cross-sectional survey. *Nurse Education Today*, *83*, 104196.

Uludağ, E., & Deveci, G. (2018). Evaluation of Cultural Intelligence of Nursing Students. *Gümüşhane University Journal of Health Sciences, 7*(1), 70–76.

Verkuyten, M., & Yogeeswaran, K. (2020). Cultural diversity and its implications for intergroup relations. *Current opinion in psychology, 32*, 1-5. https://doi.org/10.1016/j.copsyc.2019.06.010

.

Wang, C., Shakespeare-Finch, J., Dunne, M. P., Hou, X. Y., & Khawaja, N. G. (2021). How much can our universities do in the development of cultural intelligence? A cross-sectional study among health care students. *Nurse Education Today*, *103*, 104956.

Wolf, Z. R., Giardino, E. R., Osborne, P. A., & Ambrose, M. S. (1994). Dimensions of Nurse Caring. *Image J Nurs Sch,* 26, 107-11.

World Health Organization. (2019). Patient Safety. Available at: https://www.who.int/news-room/fact-sheets/detail/patientsafety. Accessed September 12,2022