

Determining Nurses' Personality Traits and The Affecting Factors

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ABSTRACT:

Purpose: This study was conducted to determine the personality traits of nurses and the affecting factors.

Material and Methods: The descriptive and cross-sectional research was carried out with 1200 nurses working in public and university hospitals in four cities in the Eastern Anatolia region of Türkiye. Introductory Information Form and "The Big Five Inventory (BFI)" were used as data collection tools. Number, percentage, mean, standard deviation, Independent Samples t Test, One-way ANOVA test and Kruskal Wallis-H test were used to analyse the data.

Results: The mean age of the nurses in the study was 29.74±7.61 years, %77,8 of them were women, 50.1% of them were married, 54.8% were university graduates and 52,0% had less than 5 years of work experience in the profession. Their total mean BFI score was 3.48±0.42, and the mean scores from the subscales of extraversion, agreeableness, conscientiousness, neuroticism and openness were 3.44±0.71, 3.82±0.66, 3.73±0.67, 2.90±0.60 and 3.50±0.67, respectively. Statistically significant differences were found between nurses' age, gender, marital status, education level, length of work experience in the profession, working hours, the place where they lived most of their lives, the education level of their mothers and fathers, birth order and the general structure of their families and the mean score from BFI subscales ($p < 0.05$).

Conclusion: Nurses' agreeableness and conscientiousness personality trait scores were the highest and the emotional instability scores were the lowest. A significant relationship was found between the nurses' personality traits and some of their personal and professional traits. It may be suggested to evaluate the personality traits of nurses in processes such as recruitment, field selection, and manager assignment.

Keywords: Nurse, personality traits, affecting factors

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INTRODUCTION

Nurses, as important members of the health team, are responsible for the protection and promotion of the physical, mental and social health of the individual, family and society, and for the treatment, care and rehabilitation in case of illness. A high-quality nursing approach depends not only to their professional knowledge and skills but also their personalities. Personality traits of an individual are part of a whole but is continual as well. They are unique to the individual and distinguish him/her from others (Gözel, Atmaca and Durat, 2017;

Özdemir, Temiz and Akın, 2020; Alan and Baykal, 2018). Many studies on understanding, identifying, analysing and classifying the individual have specifically addressed the subject of "personality" (Dinç, 2018; Bahar and Köroğlu, 2021). The concept of personality is defined as a person's distinctive features, the whole of his/her spiritual and mental state, character or habits and behaviours that he/she has gained in social life (TDK, 2022). Cüceloğlu defines personality as a type of continuous and stable relationship with the internal and external environment that enables individuals to be

distinguished from each other (Cüceloğlu, 2020). Personality refers to the most specific behaviours that a person consistently demonstrates and allows him/her to be distinguished from others (Gençtanırım Kurt and Çetinkaya Yıldız, 2017). As any feature that separates individuals from others, personality too affects life in its totality. It can therefore be said that personality traits are one of the foremost reasons why people develop different perceptions or different solutions in the face of identical events. Heredity, environment, family, geographical and physical conditions were suggested as effective factors in the formation of personality (İnanç and Yerlikaya, 2011). There are many approaches to explain the concept of personality. Eysenck, Jung, Myers-Briggs, A and B types and the Five Factor Personality Model are among the major ones (Gençtanırım Kurt and Çetinkaya Yıldız, 2017). As a result of numerous studies carried out in different cultures and with different sample groups, the five-factor personality traits theory is now widely accepted by different fields and disciplines. The five-factor personality model both takes into account the differences in the personality of the individual and proposes a classification related to personality traits. The five-factor personality traits theory consists of five subscales, namely extraversion, openness, conscientiousness, agreeableness, and neuroticism (emotional instability). (Digman, 1990; Buckner, Castille and Sheets, 2012; Soucier et al., 2005; Mount et al., 2005; Barrick, Stewart and Piotrowski, 2002; Goldberg, 1992; McCrea and Costa, 1991).

Neuroticism: Low emotional stability and balance involve emotions such as sadness, anxiety, pessimism, and tension and people who score high in neuroticism have difficulty in coping with stress and challenges and feel more stressed in the face of daily events compared to others (Bacanlı, İlhan and Aslan, 2009; Benet Martinez and John, 1998; McCrea, 2002; Somer, Korkmaz and Tatar, 2002).

Openness: It refers to being open to new experiences and mental and experiential intensity and depth in individuals. Those with open personality trait have flexible attitudes. They embrace opportunities for new experiences and

changes. They are curious, open to development, innovative and can handle events in all aspects. (Merdan, 2011; Tekin et al., 2012; Sıgır, Şişman and Gemlik, 2010).

Extraversion: Extraverted individuals are friendly, energetic, social and entrepreneurial (Chauvin, Hermand and Mullet, 2007; Costa and McCrae, 1992). They can adapt to people from different cultures and blend easily in social environments (Burke, Matthiesen and Pallesen, 2006; Barrick, Stewart and Piotrowski, 2002).

Agreeableness: Individuals with the agreeableness personality trait are responsive to the moods of those around them, have high empathy skills, are disposed to teamwork and enjoy working in cooperation (Somer, Korkmaz and Tatar, 2002; Barrick, Stewart, Piotrowski, 2002; Camps, Jeroen and Martin 2016; Bono et al., 2002)

Conscientiousness: Individuals with the conscientiousness personality trait are goal-oriented, careful, socially sensitive, self-disciplined, ordered, scheduled, diligent and stable. (Burke, Matthiesen and Pallesen, 2006; Raja, Johns and Ntalianis, 2004). In order for individuals to be happy in their lives and to be successful in their career, it is very important for them to be in professions that are suitable for their personalities. Today, however, economic conditions, politics, environmental conditions, luck, norms, social value judgments and attitudes are effective in what people choose as their profession. This affects employee satisfaction and success in the nursing profession, as in other professions. In accordance with the modern management approach, it is important that the goals and objectives of the institution and the employee be parallel and to assign employees in areas suitable for their personality traits in increasing their productivity, commitment to the profession and life satisfaction (Ocak et al., 2017; Kajander-Unkuri et al., 2014; Costa and McCrae 1992).

Today, many organisations are undergoing changes because of globalization. In healthcare organisations, where the consequences of globalization is felt most, the most important factor

in predicting the changes resulting from globalization, adapting to them and gaining competitive advantage is human resources (Erat and Arap, 2017; Göktaş and Baysal, 2018). Healthcare professionals are expected to have high physical and mental resilience, as they have to maintain labour-intensive and uninterrupted service. (Bahar and Köroğlu, 2021). Given that nurses working in service-oriented healthcare organizations with patient care and treatment duties are in a professional position that directly determines the quality of service, their personality factor is apparently a critical consideration (Kurt and Yiğit 2017; Ocak et al. 2017; Gözel, Atmaca and Durat, 2017). Effective and skilled nurses are diligent, strong-willed, determined, open to new experiences, distinctive, flexible, focused on specializing in their field, have high imagination and self-control. The present study was conducted to determine the personality traits of nurses and the affecting factors. The answers to the following questions were sought:

- What are the personality traits of nurses?
- Do the personality traits of nurses differ significantly according to their personal and professional traits?

MATERIAL and METHODS

Purpose and Type of the Study

The study was conducted descriptively and cross-sectionally to determine the personality traits of nurses and the affecting factors.

Sampling and Participants: The population of the research covered 1357 nurses working in public and university hospitals in four cities in the Eastern Anatolia region of Türkiye. It was aimed to reach the whole population without using any sampling method. However, data were collected from 1200 nurses who were not off duty during data collection and volunteered to participate in the research and from whom usable data was obtained. Participation rate in the study was 87.7%. The research was carried out between April 2018 and June 2019.

Data Collection Tools

“Introductory Information Form” and “Big Five Inventory” were used as data collection tools in the

study.

Introductory Information Form: It was prepared by the researcher in line with the literature and consists of questions on nurses’ personal and professional traits (age, gender, marital status, education, length of work experience in the profession, type of work, place where they lived most of their lives, education level of parents, birth order, general structure of their families, etc.).

Big Five Inventory (BFI): Developed by John, Donahue and Kentle (1991), this inventory was adapted to our language by Alkan in 2007 and its reliability study was conducted. It consists of 44 items and 5 subscales and is a 5-point Likert-type scale with scores ranging from 1 to 5 (Alkan, 2007; Yorgancılar, 2019; Karaman, Doğan and Çoban, 2010; Benet-Martinez and John, 1998). As a result of the scale adaptation study, the Cronbach alpha value of the scale was .87. In this study, the Cronbach’s alpha value of the scale was .89.

Data Collection

The data were obtained by the researcher, using face-to-face interviews and data collection tools, after explaining the nurses the purpose of the research and obtaining their informed consent.

Statistical Analysis

Data were evaluated using number, percentage, mean, standard deviation, Independent Samples T Test, One-way ANOVA test, Kruskal Wallis-H test (Cevahir, 2020).

Cohen (d) and Eta squared (η^2) coefficients were used to calculate the effect size. Cohen values of 0.2, 0.5 and 0.8 were considered as low, medium and high, respectively, and eta square values of 0.01, 0.06 and 0.14 were considered as low, medium and high, respectively (Cohen, 1998).

Ethical Approval

Ethics committee approval (05.02.2018-0/057) from the Non-Interventional Clinical Research Ethics Committee of a university and institutional permissions from the relevant institutions were obtained to conduct the study. Permission was obtained from Alkan for the use of the Big Five Inventory (BFI). After obtaining permission from the

city health directorate in the cities where the study hospitals were located and from hospital managements, relevant information was given to the participant nurses and their written and verbal permissions were obtained during the conduct of the research.

RESULTS

Nurses' ages ranged from 16 to 59 years, with an average of 29.74±7.61 years. Of the nurses included in the study, 77.8% were women, 50.1% were married and 54.8% were licence graduates.

The length of work experience of 52% was 5 years and 61.8% worked in shifts. 78.0% lived most of their lives in a city, and 40.6% of their mothers and 41.7% of their fathers were primary school graduates. 32.7% were the first child and the general family structure was protective in 47.4% (Table 1).

The distribution of the Big Five Inventory scores is given in Table 2, showing that the subscale scores were highest in the agreeableness and conscientiousness subscales and the lowest in the neuroticism subscale.

Table 1. Distribution of Demographic and Professional Traits of Nurses (N=1200) Traits

Characteristics	n	(%)
Age (29.74±7.61; 16-59)		
≤ 25 years	539	(44.9)
26-30 years	275	(22.9)
31-35 years	148	(12.3)
36-40 years	100	(8.3)
≥ 41 years	138	(11.5)
Gender		
Female	934	(77.8)
Male	266	(22.2)
Marital status		
Married	601	(50.1)
Single	599	(49.9)
Education status		
Health Vocational High School	177	(14.8)
Associate Degree	336	(28.0)
Licence Degree	658	(54.8)
Master Degree	29	(2.4)
Length of work experience in the profession (years)		
≤ 5 years	624	(52.0)
6-10 years	278	(23.2)
11-15 years	118	(9.8)
≥ 16 years	180	(15.0)
Working hours		
Day	396	(33.0)
Night	62	(5.2)
In shifts	742	(61.8)
Lived mostly in		
Village/small town	130	(10.8)
City	936	(78.0)
Metropolitan city	134	(11.2)
Mother's education level		
Illiterate	301	(25.1)
Literate	217	(18.1)
Primary school	487	(40.6)
High school	166	(13.8)
University or higher	29	(2.4)

Table 1 (continued). Distribution of Demographic and Professional Traits of Nurses (N=1200) Traits

Characteristics	n	(%)
Father's education level		
Illiterate	69	(5.8)
Literate	188	(15.6)
Primary school	500	(41.7)
High school	330	(27.5)
University or higher	113	(9.4)
Birth order		
1 st	393	(32.7)
2 nd	290	(24.2)
3 rd	174	(14.5)
4 th child	99	(8.3)
≥ 5 th child	244	(20.3)
General family structure		
Authoritarian	233	(19.4)
Democratic	298	(24.8)
Protective	569	(47.4)
Overly caring	75	(6.3)
Indifferent	25	(2.1)

Table 2. Mean Scores of the Big Five Inventory of Nurses (BFI) (N=1200)

Subscale	Number of questions	Min.	Max.	Mean±SD
Extraversion	8	1	5	3.44±0.71
Agreeableness	9	1	5	3.82±0.66
Conscientiousness	9	1	5	3.73±0.67
Neuroticism	8	1	5	2.90±0.60
Openness	10	1	5	3.50±0.67
Total	44	1	5	3.48±0.42

Table 3. Evaluation of Big Five Inventory Scores by Demographic and Professional Traits of Nurses (N=1200)

	n	Big Five Inventory (BFI)					Total
		Extraversion	Agreeableness	Conscientiousness	Neuroticism	Openness	
		Mean±SD	Mean±SD	Mean±SD	Mean±SD	Mean±SD	Mean±SD
Age (years)							
≤ 25 years ¹	539	3.53±0.76	3.89±0.65	3.81±0.64	2.94±0.63	3.63±0.66	3.56±0.42
26-30 years ²	275	3.33±0.71	3.78±0.65	3.69±0.67	2.96±0.61	3.50±0.69	3.51±0.43
31-35 years ³	148	3.41±0.66	3.73±0.64	3.63±0.70	2.81±0.57	3.35±0.62	3.37±0.39
36-40 years ⁴	100	3.32±0.59	3.85±0.65	3.70±0.72	2.72±0.54	3.17±0.61	3.40±0.41
≥ 41 years ⁵	138	3.39±0.63	3.68±0.68	3.62±0.69	2.81±0.50	3.42±0.68	3.38±0.41
<i>Test value</i>		F: 4.705	F: 4.232	F: 4.198	F: 5.445	F: 14.110	F: 10.908
<i>statistics</i>		<i>p</i> : .001**	<i>p</i> : .002***	<i>p</i> : .002**	<i>p</i> : .000***	<i>p</i> : .000***	<i>p</i> : .001**
<i>Scheffe (η²)</i>		1>3 (.01)	1>3,5 (.00)	1>3 (.01)	1,2>4 (.02)	1>3,4,5 (.04)	1>2,3,4 (.04)

Table 3 (continued). Evaluation of Big Five Inventory Scores by Demographic and Professional Traits of Nurses (N=1200)

	n	Big Five Inventory (BFI)					Total
		Extraversion Mean±SD	Agreeableness Mean±SD	Conscientiousness Mean±SD	Neuroticism Mean±SD	Openness Mean±SD	
Gender							
Female	934	3.46±0.72	3.85±0.66	3.76±0.67	2.88±0.62	3.49±0.68	3.49±0.43
Male	266	3.33±0.68	3.69±0.64	3.65±0.66	2.93±0.55	3.55±0.67	3.43±0.40
<i>Test value statistics</i>		t: 2.711	t: 3.518	t: 2.225	t: -1.190	t: -1.200	t:
<i>Cohens d</i>		p: .007**	p: .000***	p: .026*	p: .234	p: .230	p: .047*
		.19	.25	.16			.14
Marital status							
Married	601	3.37±0.67	3.79±0.65	3.68±0.67	2.87±0.53	3.39±0.65	3.42±0.41
Single	599	3.50±0.75	3.85±0.66	3.79±0.68	2.92±0.67	3.61±0.69	3.53±0.43
<i>Test value statistics</i>		t: -3.057	t: -1.438	t: -2.790	t: -1.507	t: -5.692	t: -4.623
<i>Cohens d</i>		p: .002**	p: .151	p: .005**	p: .132	p: .000***	p: .001**
		.18		.16		.33	.26
Education status							
Health							
Vocational High School ¹	177	3.46±0.66	3.89±0.62	3.70±0.67	3.14±0.63	3.55±0.65	3.54±0.46
Associate Degree ²	336	3.39±0.71	3.78±0.67	3.72±0.70	3.25±0.41	3.45±0.67	3.49±0.50
Licence ³	658	3.45±0.72	3.82±0.65	3.74±0.65	3.02±0.59	3.52±0.67	3.55±0.50
Master ⁴	29	3.42±0.80	3.77±0.78	3.86±0.77	3.07±0.57	3.50±0.88	3.57±0.6
<i>Test value statistics</i>		F: 0.739	F: 1.271	F: 0.589	F: 2.663	F: 1.286	F: 1.051
<i>Scheffe (η2)</i>		p: 0.529	p: 0.283	p: 0.622	p: 0.047*	p: 0.278	p: 0.369
					1,2>3,4 (.01)		
Length of work experience in the profession (years)							
≤ 5 years ¹	624	3.49±0.76	3.83±0.66	3.77±0.66	2.92±0.64	3.64±0.68	3.53±0.43
6-10 years ²	278	3.37±0.68	3.86±0.66	3.74±0.68	2.90±0.62	3.37±0.65	3.45±0.41
11-15 years ³	118	3.36±0.63	3.81±0.58	3.68±0.69	2.91±0.54	3.31±0.61	3.39±0.37
≥ 16 years ⁴	180	3.40±0.62	3.71±0.67	3.63±0.70	2.79±0.48	3.37±0.65	3.40±0.43
<i>Test value statistics</i>		F: 2.734	F: 2.163	F: 2.440	F: 2.094	F: 17.473	F: 7.768
<i>Scheffe (η2)</i>		p: .042*	p: .091	p: .063	p: .099	p: .000***	p: .001**
		1>3 (.01)				1>2,3,4 (.05)	1>2,3,4 (.02)
Working hours							
Day ¹	396	3.45±0.68	3.91±0.66	3.78±0.68	2.89±0.56	3.54±0.66	3.51±0.40
Night ²	62	3.42±0.65	3.96±0.60	3.88±0.73	3.01±0.53	3.55±0.76	3.56±0.49
In shifts ³	742	3.43±0.74	3.76±0.65	3.69±0.66	2.89±0.63	3.48±0.68	3.45±0.43
<i>Test value statistics</i>		F: 0.138	F: 8.034	F: 3.800	F: 1.146	F: 1.066	F: 4.292
<i>Scheffe (η2)</i>		p: .871	p: .000***	p: .023*	p: .318	p: .345	p: .014*
			2>3 (.01)	2>3 (.01)			2>3 (.01)
Lived mostly in							
Village-small town ¹	130	3.50±0.66	3.74±0.66	3.58±0.68	2.83±0.62	3.50±0.66	3.43±0.41
City ²	936	3.41±0.72	3.81±0.66	3.75±0.68	2.90±0.60	3.48±0.68	3.47±0.43
Metropolitan city ³	134	3.54±0.73	3.93±0.59	3.75±0.63	2.92±0.60	3.64±0.67	3.56±0.40
<i>Test value statistics</i>		F: 2.553	F: 3.036	F: 3.833	F: 0.896	F: 3.139	F: 3.408
<i>Scheffe (η2)</i>		p: .078	p: .048*	p: .022*	p: .408	p: .044*	p: .033*
			3>1 (.01)	2,3>1 (.01)		3>2 (.01)	3>1 (.01)

Table 3 (continued). Evaluation of Big Five Inventory Scores by Demographic and Professional Traits of Nurses (N=1200)

	n	Big Five Inventory (BFI)					Total Mean±SD
		Extraversion Mean±SD	Agreeableness Mean±SD	Conscientiousness Mean±SD	Neuroticism Mean±SD	Openness Mean±SD	
Mother's education level							
Illiterate ¹	301	3.29±0.67	3.76±0.64	3.63±0.66	2.89±0.60	3.42±0.68	3.40±0.40
Literate ²	217	3.44±0.74	3.81±0.64	3.78±0.70	2.91±0.59	3.59±0.70	3.50±0.44
Primary school ³	487	3.51±0.72	3.83±0.67	3.78±0.65	2.88±0.63	3.53±0.68	3.50±0.42
High school ⁴	166	3.48±0.70	3.96±0.65	3.77±0.68	2.91±0.52	3.46±0.59	3.52±0.41
University or higher ⁵	29	3.28±0.63	3.57±0.65	3.33±0.68	3.08±0.70	3.52±0.71	3.36±0.42
Test value statistics		F: 5.166 <i>p</i> : .000***	F: 3.587 <i>p</i> : .006**	F: 5.603 <i>p</i> : .000***	F: 0.807 <i>p</i> : .521	F: 2.110 <i>p</i> : .077	F: 4.489 <i>p</i> : .001**
MWU (η^2)		3,4>1,5 (.02)	3,4>1,5 (.01)	2,3,4>1 (.03)			4>1,5 (.01)
Father's education level							
Illiterate ¹	69	3.15±0.73	3.64±0.68	3.52±0.62	3.03±0.62	3.44±0.65	3.36±0.37
Literate ²	188	3.37±0.73	3.79±0.64	3.70±0.66	2.89±0.57	3.54±0.71	3.46±0.44
Primary school ³	500	3.49±0.73	3.84±0.66	3.75±0.70	2.87±0.65	3.57±0.71	3.50±0.45
High school ⁴	330	3.40±0.67	3.84±0.63	3.77±0.65	2.95±0.53	3.43±0.60	3.48±0.38
University or higher ⁵	113	3.58±0.67	3.82±0.69	3.71±0.68	2.79±0.61	3.43±0.67	3.47±0.41
Test value statistics		F: 5.217 <i>p</i> : .000***	F: 1.652 <i>p</i> : .159	F: 2.244 <i>p</i> : .062	F: 2.549 <i>p</i> : .038*	F: 2.752 <i>p</i> : .027*	F: 2.050 <i>p</i> : .085
Scheffe (η^2)		3,5>1 (.02)			1>5 (.01)	3>4,5 (.01)	
Birth order							
1 st child ¹	393	3.49±0.75	3.88±0.65	3.78±0.67	2.94±0.62	3.59±0.68	3.53±0.43
2 nd child ²	290	3.48±0.69	3.79±0.68	3.67±0.70	2.86±0.59	3.43±0.67	3.44±0.43
3 rd child ³	174	3.33±0.66	3.75±0.61	3.69±0.61	2.90±0.54	3.45±0.63	3.42±0.39
4 th child ⁴	99	3.33±0.75	3.80±0.65	3.74±0.70	2.85±0.65	3.44±0.73	3.43±0.43
≥ 5 th child ⁵	244	3.41±0.70	3.81±0.67	3.77±0.68	2.89±0.61	3.52±0.68	3.48±0.41
Test value statistics		F: 2.423 <i>p</i> : .047*	F: 1.443 <i>p</i> : .218	F: 1.476 <i>p</i> : .207	F: 1.004 <i>p</i> : .404	F: 3.002 <i>p</i> : .018*	F: 3.337 <i>p</i> : .010*
Scheffe (η^2)		1>3,4 (.01)				1>2 (.01)	1>3 (.01)
General family structure							
Authoritarian ¹	233	3.33±0.74	3.72±0.66	3.68±0.64	3.00±0.56	3.50±0.69	3.44±0.44
Democratic ²	298	3.57±0.66	3.85±0.71	3.78±0.72	3.23±0.60	3.54±0.69	3.50±0.41
Protective ³	569	3.38±0.71	3.83±0.62	3.72±0.66	3.08±0.61	3.47±0.65	3.46±0.41
Overly caring ⁴	75	3.62±0.72	3.92±0.60	3.77±0.64	3.11±0.56	3.56±0.75	3.55±0.49
Indifferent ⁵	25	3.47±0.80	3.80±0.70	3.78±0.63	3.02±0.70	3.68±0.79	3.54±0.47
Test value statistics		F: 5.893 <i>p</i> : .000***	F: 1.801 <i>p</i> : .098	F: 0.997 <i>p</i> : .276	F: 5.581 <i>p</i> : .000***	F: 1.149 <i>p</i> : .411	F: 1.451 <i>p</i> : .225
MWU (η^2)		4,2>1,3 (.02)			2>1,3 (.02)		

^aOne way ANOVA Test
**p*<0.05

^bStudent's t Test
***p*<0.01

^cKruskal Wallis Test
****p*<0.001

In the comparisons by age, the 25 and lower age group had a significantly higher mean score from BFI compared to the 26-30, 31-35, and 36-40 age groups. In extraversion and conscientiousness subscales, the mean score of the 25 and lower age group was significantly higher compared to the 31-35 age group ($p < .01$). In the agreeableness subscale, the mean score of the 25 and lower age group was significantly higher compared to the 31-35 and 41 and over age groups. In the neuroticism subscale, the 25 and lower and the 26-30 age groups had significantly higher mean scores than the 36-40 age group. In the openness subscale, the 25 and lower age group had a significantly higher score than the 31-35, 36-40 and 41 and over age groups ($p < .001$)

In comparisons by gender, women had a significantly higher score compared to men for BFI total and conscientiousness ($p < .05$), extraversion ($p < .01$) and agreeableness ($p < .001$) subscales.

In comparisons by marital status, the mean score of singles was significantly higher than the mean score of the married participants for the BFI total and extraversion, conscientiousness ($p < .01$) and openness ($p < .001$) subscales.

In comparisons by educational status, the mean score of the health vocational high school and associate degree graduates was significantly higher than the mean score of the licence and master degree graduates for the neuroticism subscale ($p < .05$).

In comparisons by length of work experience in the profession, the mean score for the extraversion subscale of the group with a length of experience of 5 years or less was significantly higher than the mean score of the group with a length of experience of 11-15 years. In the BFI total ($p < .01$) and for the openness subscale, the mean score of the group with a length of experience of 5 years or less was significantly higher than the groups with length of experience of 6-10, 11-15 and 16 years or more ($p < .001$).

In the comparisons by working hours, the mean score of the weekly night shift group was significantly higher than the mean score of the group working in shifts for the BFI total score and for conscientiousness ($p < .05$) and agreeableness ($p < .001$) subscale scores.

In the comparisons by the place where they lived most of their lives, the mean score of the groups that have lived mostly in a city and a metropolitan city was significantly higher compared to the group that lived mostly in a village or town for the conscientiousness subscale. For the openness subscale, the mean score of the group that mostly lived in a metropolitan city was significantly higher compared to the group that lived mostly in a city ($p < .05$). For BFI total and agreeableness subscale, the mean score of the group that lived mostly in a metropolitan city was significantly higher compared to the group that mostly lived in a village or town ($p < .001$).

In the comparisons by mother's education level, the mean BFI total score of the group whose mothers had high school degrees was significantly higher compared to those whose mothers were illiterate or university graduates ($p < .001$). For agreeableness and extraversion subscales, the mean scores of the groups whose mothers had primary or high school degrees were significantly higher than the mean score of the groups whose mothers were illiterate or university graduates ($p > .05$, $p < .001$, respectively). For the conscientiousness subscale, the mean scores of the groups whose mothers were literate, primary and high school graduates were significantly higher compared to the groups whose mothers were illiterate or university graduates ($p < .001$).

In the comparisons by the father's education level, the mean score from the neuroticism subscale of the group whose fathers were illiterate was significantly higher compared to the group whose fathers were university graduates ($p < .05$). For the openness subscale, the mean score of the group whose fathers were primary school graduates was significantly higher compared to the groups whose fathers were high school and university graduates ($p < .05$). For the extraversion subscale, the mean score of the group whose fathers were primary school and university graduates was significantly higher compared to the group whose fathers were illiterate ($p < .001$).

In comparisons by birth order (number of elder siblings), the 1st child group had a higher mean score for the extraversion subscale compared to the 3rd and 4th child groups, a higher BFI total mean score compared to the 3rd child group and a higher

mean score for the openness subscale compared to the 2nd child group ($p < .05$).

In the comparisons by the general family structure, the mean scores of the groups that defined their family structures as overly caring and democratic were significantly higher compared to the groups that defined their family structures as authoritarian and protective for the extraversion subscale. For the neuroticism subscale, the mean scores of the groups that defined their family structures as democratic were significantly higher than the mean score of the group that defined their family structure as authoritarian and protective ($p < .001$) (Table 3).

DISCUSSION

This study was conducted to determine the personality traits of nurses and the affecting factors. The study showed that nurses' BFI subscale scores were the highest in agreeableness and conscientiousness subscales, and lowest in the neuroticism subscale. According to the study of Çakıroğlu (2015), nurses had high mean scores for agreeableness and conscientiousness traits, with the lowest score being from neuroticism. In their studies on nurses, Louch et al. (2016) and Yorgancılar (2019) also found the highest values for conscientiousness and the lowest for neuroticism. Likewise, in the study by Alan and Baykal (2018) evaluating the personality traits of nurse managers, the "self-control/conscientiousness factor" score was the highest. According to these authors, the nurses with the conscientiousness trait are ordered and scheduled, like working, pay attention to details and try their best in their work. On the other hand, they do not like to take risks much, prefer a steady working life, act cautiously, observe the rules and attach importance to traditional values, and are perceived as a reliable person by others (Alan and Baykal, 2018; Somer, Korkmaz and Tatar, 2004).

The study showed that neuroticism, which has the lowest average score in the study, is significantly higher at low age and low educational level. It may be recommended to increase the education levels of nurses and to support nurses at young age. In the study of Alan and Baykal (2018), the fact that the nurses' lowest mean score was from the neuroticism factor indicates that they tend to have a balanced,

consistent and durable emotional structure. In the study of Drach-Zahavy and Srulovici (2019), it was concluded that high openness and low neuroticism levels were associated with moral actions of nurses (Drach-Zahavy and Srulovici, 2019). Özcan and Mercan (2016) argued that nurses with the neuroticism personality trait were more prone to burnout.

The findings of the study titled "The effect of nurses' personality traits and environmental characteristics on their learning and nursing competencies at the workplace" published by Takase, Yamamoto, Sato in 2018 showed that nurses' confidence in their professional competence increases when certain environmental conditions are provided to nurses with certain personality traits. It is very important for extroverted nurses to be provided with a learning environment in the workplace and to receive feedback so that they feel competent. For nurses with an introverted personality, autonomy has been identified as an important environmental factor that can facilitate learning at work and make them feel competent. In the study, most of the nurses were considered to be extroverts because the mean score for extraversion was above the scale mean. Therefore, it was concluded that providing feedback to nurses in general can facilitate learning at work and increase their professional competence. For this reason, it is recommended to develop systems where nurse managers and educators can provide regular feedback on nursing practices. The results of the study also showed that introverted nurses tend to exhibit higher nursing proficiency than extroverted nurses in an environment that provides autonomy (Takase, Yamamoto and Sato, 2018). According to the results of Heydari, Kareshki, Armat's study on Iranian nurses in 2016 titled "Is nurses' professional competence related to their personality and emotional intelligence? A cross-sectional study", nurses' personality and emotional intelligence are significantly related to their competency levels. In this study, personality and emotional intelligence traits were similar between male and female nurses, and conscientiousness got the maximum and neuroticism (emotional instability) got the minimum score in personality assessment (Heydari, Kareshki and Armat, 2016). In Özdemir's (2018) study, nurses'

mean scores from the subscales were high for agreeableness, extraversion and emotional stability subscales. A significant relationship was also found between extraversion score and professional satisfaction (Özdemir, 2018). Studies have shown that extraversion, conscientiousness and openness to experience are positively associated with different aspects of professional competence and performance (Dragoni et al., 2011; Ellershaw et al., 2015; Zimmerman, Triana and Barrick, 2010). For example, extroverted individuals open to experience are motivated to do hard work and thus, they get actively involved in their work and develop strategic thinking competence (Dragoni et al., 2011). Extroverted and conscientious employees are empathetic and social and are therefore competent in interpersonal communication (Hullman et al., 2010).

Based on the notable results of the study, nurses' scores increase as age decreases, and it is concluded that female nurses are more extroverted, agreeable and responsible than males. In addition, single nurses were more extroverted, conscientious and open individuals than married ones, those with a low level of education are more neurotic, those living in larger cities were more agreeable, conscientious and open individuals, and night-shift workers were more agreeable and conscientious than day-shift workers. Parent education had a positive effect on nurses. Those whose family structures were democratic and overly caring were more extroverted than those with indifferent and authoritarian family structures, and nurses with a democratic family structure had higher neuroticism scores than nurses with an authoritarian and protective family structure.

In the study of Sönmez (2022), no significant difference was found between age and personality, and in the study of Terlemez (2019), a positive and significant relationship was found between age and conscientiousness. In the study of Menteşe (2017), there was a positive relationship between age and agreeableness, in Arslan (2018)'s study, there was a positive significant relationship between age and conscientiousness and agreeableness, and in Aytekin (2019)'s study, there was a significant and positive relationship between age and agreeableness and conscientiousness and a negative significant

relationship with neuroticism.

In the studies of Heydari, Kareshki and Armat (2016), Menteşe (2017) and Sönmez (2022), personality traits did not differ significantly by gender. Studies have shown that women are more agreeable (Sezgin, 2019), more neurotic (Ada, 2021), more conscientious and open (Arslan, 2018), more conscientious, open and neurotic (Yılmaz, 2019) and more agreeable and conscientious (Aytekin, 2019). When the education level and personality traits were compared, no significant difference was observed in Sezgin's (2019) study, while in Sönmez's (2022) study, neuroticism was found to be higher in high school graduate nurses. In the study of Arslan (2018), those with a higher education level had more extrovert, open, conscientious and agreeable personality traits, while in Deveci's (2020) research, more participants with associate degrees had agreeable and open personality traits. In the study of Kaleli (2019), participants with high school and associate degrees were more conscientious, while those with a postgraduate degree were more open to new experiences.

The BFI total score and openness score of nurses who have been working in the profession for five years or less were higher than those who have been working for more time, and their extraversion scores were higher than those who have been working for 11-15 years. However, in the study conducted by Uzuntarla and Cihangiroğlu (2016) with nurses, no statistically significant difference was found between groups classified according to years of professional experience in terms of personality total scores.

Findings obtained from studies involving participants from the nursing profession are consistent with ours (Çakıroğlu, 2015; Özdemir, 2018; Alan and Baykal, 2018; Yorgancılar, 2019). Studies indicate that the five-factor personality model gives successful results in measuring several behavioural features such as job satisfaction, career satisfaction, motivation, avoiding work, quitting, teamwork, organizational commitment, job performance, creativity, and coping with stress (Torun and Şenel Tekin, 2014).

CONCLUSION

It was concluded that nurses who were younger than 25 years old, single, had a high education level, lived

most of their lives in big cities, and had positive family features generally had more positive personality traits. Nurses with these characteristics should be evaluated and nurses who are older, male, married, have lower education levels, lived most of their lives in small cities and are more disadvantaged in terms of family characteristics, should be supported in their development.

These findings show that nurses are more self-directed, self-disciplined, independent, determined, ambitious, goal and success-oriented, open to change, self-managing their own activities, and conscientious, that is, "autonomous".

Individuals with a strong sense of responsibility develop their evaluative aspects as a result of learning and socialization, and they are more likely to be rational in their reactions. Factors such as the fact that the nursing profession requires more multidisciplinary work than other occupational groups, that it has intense working conditions, and that the majority of the practitioners are women may lead to more conscientious and agreeable personality traits than other professions. Therefore, nurses having this personality trait is considered desirable for the profession.

In this study, the low scores of the nurses on the neurotic personality trait, which is also defined as the level of tolerance to stress, are considered desirable for adaption, stability and ability to manage conflict and stress situations.

It can be recommended to evaluate the personality traits of nurses in processes of recruitment, field selection and manager assignment, and to give nurses the opportunity and support to evolve favourably by recognizing their personalities.

Conflict of Interests

The authors declare that there is no conflict of interests.

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