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FROM THE EDITOR…

Dear Readers,

Welcome to experiencing the first issue of *CURARE-The Nursing Journal*, the publication of Istanbul University Faculty of Nursing. In February, we would have had the pride and happiness of sharing with this you but for the bitter earthquake that occurred in Türkiye that has directly affected all of us here.

The significance of Türkiye as an earthquake-prone country has appeared again in the efforts at understanding how and why earthquakes occur, the possibility of predicting earthquakes in advance, determining the direct and indirect effects on society, and sharing these with readers. *CURARE -The Nursing Journal* starts this year electronically with three points of publication when taking into account the additional contributions: articles on nursing, the importance of scientific publications, and the effects of the latest earthquakes not just in the disaster zone but throughout Turkey and all over the world. 17 faculties were established in 2022 within the University of Istanbul, which operates as a bridge for science from the past to the future, and the Faculty of Nursing as one of these newly established faculties has its roots stretching back to ancient times. We are aware of the necessity and importance of having a journal on the science of nursing, which falls under the umbrella of such a strong university. After we decided to publish our journal, the first step was to determine its name, and after a long exchange of ideas, we decided to make it the Latin word *curare*, which we think reflects the meaning of nursing very well. I would like to thank Prof. Çiğdem DÜRÜŞKEN, Head of the Department of Latin Language and Literature at Istanbul University, for shedding light on determining the name of our journal with her valuable opinions and suggestions and convey the meaning of *curare* in her own words:

> *The Latin verb* curare *has a unique place in the medical language and literature with the meanings it contains and the meanings of the terms derived from it and mainly means "to care, to look after, to watch over, to take care of, to worry about, to be concerned with; to be busy with a job, to take the trouble, to deal with official affairs, to manage, and to administer." In the language of medicine, it means "to take care of a patient, to restore health, to heal, to heal through concern and care" and in Ancient Greek,* curare *has equivalent usage with the verb* therapeutic *(θεραπεύειν), meaning "to cure, to heal." The words curation and cure derived from* curare *and generally refer to "protection, care, attention, concern, and carefulness; Although it has the meanings of "managing, administering," it is used in the sense of "healing by looking, returning one to health" in medical language. Likewise, the word* current*, which is used as a synonym for the Latin* medicus*, means "the person who treats and heals, the physician," and the word* curanderas *means "the person in need of care or treatment, the patient." are among those given to the medical language in derivation from the verb* curare*.*

We share with you, our esteemed readers, six articles in total in our first issue, including research articles and compilations on migration, COVID-19, nurses' work lives, maternal attachment, and nursing care for disadvantaged children, as well as other current research topics such as nursing science and the art of nursing. Our journal, *CURARE -The Nursing Journal*, will start its publication life as an internationally refereed journal published electronically with three issues a year; we continue our efforts to include *CURARE -The Nursing Journal* among other indexes. In this context, we are waiting for you, our esteemed colleagues, to publish your current works in our journal to contribute to our profession's development. I would like to give special thanks to our Deputy Dean Prof. Mustafa Oral ÖNCÜL, who inspired and motivated us while preparing the journal's publication and guided us through all the legal and technical processes. I would also like to thank Metin TUNÇ and the Istanbul University Press team for their support in preparing this issue, as well as the authors, the referee board, and the journal team.

Hoping to meet you in the next issue!
With love and respect…

Assoc.Prof.Nuray TURAN
Editor-in Chef

RESEARCH ARTICLE
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Nurses' Challenges of Caring for Children with Intellectual Disabilities in Acute Care Settings*

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ABSTRACT

Objective: The purpose of this study is to better understand the challenges of nurses who care for children with intellectual disabilities (ID) in acute care settings.
Materials and Methods: This is a descriptive and cross-sectional study that included 94 nurses working at pediatric wards who agreed to participate in the study. The researcher-designed, expert-evaluated survey assessed participants' demographics and challenges while caring for children with ID. Data analysis involved descriptive statistics, correlations, and multiple linear regression analysis to determine the factors that affect the experiences of nurses who provide care for children with ID.
Results: The nurses reported that they encounter various challenges while caring for a child with an ID in the hospital. These are patient and family-related challenges, nurses-related challenges, health professionals, and health system-related challenges.
Conclusion: Communication and handling challenging behaviors of children with ID were specified as the most important issues. The nurses also reported that they did not have enough knowledge and education about caring for children with ID. Understanding the challenges and experiences of nurses are important for the development of services for children with intellectual disabilities at the hospital. There is a need for training, institutional arrangements, and policies to increase the quality of care for children with ID.

Keywords: Children, intellectual disabilities, nursing, hospital, acute care

*This article was presented as a poster presentation at Sigma's 33rd International Nursing Research Congress.

INTRODUCTION

A large number of children worldwide are born physically and mentally ill or get a disease later and become disabled (1,2). Intellectual disability (ID) involves significant limitations in both intellectual functioning and adaptive behavior, which includes many social and practical skills requiring special care and rehabilitation (3). Although ID is not a disease, children with ID show many health problems, more than other children (3,4), such as epilepsy, asthma (3), eating problems (5,6), obesity (7), and pneumonia (3). Due to these health problems, they need more care and are hospitalized frequently (3). Despite the increased utilization of health care services by children with ID and their families, they experience poorer health outcomes (3).

Children with ID may have significant and complex care needs (8). Studies in the literature emphasize that nurses feel inadequate, fearful, and anxious while providing care to children with ID (9-12). These challenges experienced by nurses while providing care to children with ID may also negatively affect the healthcare services provided to these children (8). Identifying the challenges that nurses face in the care of children with ID is one of the primary steps necessary to increase the quality of health care received by these children and their families.

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Children with ID are often hospitalized to be provided with health services in our country. Although pediatric nurses take care of these children in pediatric wards, no study has been found by the authors to determine the challenges faced by pediatric nurses while caring for them in Turkey. This study aimed to better understand the challenges of nurses who care for children with ID.

MATERIALS AND METHODS

Aim and design

This study used a cross-sectional descriptive survey to better determine the factors affecting the nurses' challenges in caring for children with ID during hospitalization.

Research questions:

1. What are the challenges of nurses in caring for children with ID during hospitalization?
2. What are the factors affecting the nurses' challenges in for caring children with ID during hospitalization?
3. What is the level of predicting the descriptive characteristics of the challenges experienced by the nurses while caring for a child with ID?

Participants

Participants for this study were nursing staff working at a pediatric ward in Turkey. To be included in the study, participants were required to have been caring for the children with ID for at least 6 months. The study participants were recruited through emails, announcements, and word of mouth. The sample size was determined as 135 for multidimensional linear regression analysis based on 14 variables with a significance level of 0.05, a power of 80%, and a medium effect size of 0.15 in the GPOWER 3.0 statistical analysis program. Ninety-four of the nurses could be reached through an online platform.

Data collection tools

Data were collected through an electronic, researcher-developed, expert-evaluated survey. Researchers used studies on knowledge and attitudes about children with ID in healthcare to inform the survey item and scale development. This study was approved by Koç University's Ethics Board.

The Sociodemographic Form: It consists of 8 questions including the sociodemographic characteristics of the nurses who agreed to participate in the study.

The Nurses' Challenges for Care of Children with Intellectual Disabilities Scale (NC-CCIDS): The scale was developed based on a review of the literature on the experiences and challenges of nurses in the care of children with ID when they are hospitalized (8,9,12). The scale was reviewed by a panel of 10 experts (nurses, psychologists, and counselors) about children with ID. It was evaluated with the content validity index for the opinions of the experts. The content validity index of the items (I-CVI) was in the range between 0.99-1.00, and the content validity index of the scale (S-CVI) was between 0.99. If the I-CVI and S-CVI values are above 0.80, it indicates that there is an agreement between the expert opinions (14). In this study, the I-CVI and S-CVI values were above 0.80, indicating that there was agreement among the experts and that the scale measured the subject adequately. The final survey consisted of 27 items. Twenty-seven items asked nurses to rate the degree to which they have faced or anticipate facing challenges in the care of children with ID when they take care of the children in the hospital. These items were rated using a 4-point Likert scale anchored with endpoints 1- "not at all" to 4- "extreme". The Kaiser-Meyer-Olkin coefficient (KMO) of the scale was 0.761 and the Barlett test result was X^2= 1237,057, p= 0.001. Explanatory factor analysis was conducted to determine the factor structure of the scale consisting of 27 items. In the explanatory factor analysis, the scale has a structure with three sub-dimensions. As a result of the explanatory factor analysis, the factor loads of the child and family-related challenges sub-dimension were in the range of 0.36-0.63, the factor loads of the nurses-related challenges sub-dimension were in the range of 0.36-0.84, and the factor loads of the system related challenges sub-dimension were in the range of 0.32-0.55. After the analysis, the total variance presented is 46.33%. The presented variance ratios of the sub-dimensions are, respectively; 27.07% for "the child and family-related challenges" sub-dimension and 10.27% for "the nurses-related challenges" sub-dimension, and 8.98% for "the system-related challenges" sub-dimension. The reliability coefficient of the scale is α=0.888.

Ethical considerations

Ethical approval was obtained from the University Social Sciences Ethics Evaluation Committee (No:2020.333.IRB3.120; 5 September 2020) and participants signed a consent form. The research was conducted with those who agreed to participate by clicking on the "I agree to participate in this research" option. All nurses were informed about the purpose and procedure of the study through Qualtrics. The research was conducted by the principles of research and publication ethics.

Data analysis

The SPSS 23.0 package program was used for the analysis of the data. Mean and percentage calculations were used for evaluating the descriptive data. The Shapiro-Wilk test was used to determine the normality of scale scores. Mann Whitney U and Kruskall Wallis tests were used to compare the mean scores of The Nurses' Challenges for Care of Children with Intellectual Disabilities Scale (NC-CCICS) according to sociodemographic characteristics. Using the Bonferroni-corrected Mann-Whitney U test, which measurement caused the difference according to the work period and the unit they work in as a pediatric nurse was determined. Multiple linear regression analysis was used to determine the factors that affect the experiences of nurses who provide care for children with ID. To decide which independent variable to be included in the model (to determine if there are multiple correlations), tolerance, VIF, and condition index values were used. Independent variables below the VIF value of 10, above the tolerance value of 0.2, and below the condition index values of 15 were included in the regression analysis. Results will be evaluated at a confidence interval of 95% and a significance level of $p<0.05$.

RESULTS

Nurses' challenges in caring for children with ID during hospitalization are shown in Table 1.

The sociodemographic data of the nurses are shown in Table 2. It was determined that the nurses were not homogeneous in terms of sociodemographic characteristics (p>0.05).

There was no statistically significant difference between the total mean scores of the nurses from the scale and their age, education level, duration of employment, the hospital type they work in, the frequency of caring for the child with ID, the education about the care of the child with ID, the unit where they received training in the care of the child with ID, the presence of an ID person in their own family (p>0.05, Table 2). In addition, a statistically significant difference was shown between the gender of the nurses and their duration of employment as pediatric nurses and the total scores they got from the nurse-related challenges sub-dimension of The Nurses' Challenges for Care of Children with Intellectual Disabilities Scale (NC-CCIDS) (p<0.05, Table 2). There was a statistically significant difference between the unit, in which the nurses work, and the total mean scores collected by the nurses from the child and family-related challenges sub-dimension (p<0.05, Table 2). Additionally, a statistically significant difference was reflected between the situation where the nurses find the knowledge about the care of a child with ID sufficient and the total score and the mean scores, they got from the nurses-related challenges sub-dimension (p<0.05, Table 2). Using the Bonferroni-corrected Mann-Whitney U test, which measurement caused the difference in the employment period worked as a pediatric nurse was determined. Since there are three pairs of comparisons in the analysis, the accepted significance level (p=0.05) should be divided by three to determine the new level of significance. The new level of significance is 0.05/3=0.016. As the result of the test, there was a statistically significant difference between nurses working as pediatric nurses between the period of 0-5 years and 11 years and over according to the duration of their employment (p<0.001). It was found that the total mean scores of nurses with a duration of employment of 11 years or over collected from NC-CCIDS during Hospitalization was higher and the nurses faced challenges more often. In addition, which measurement caused the difference according to the unit they worked in was determined using the Bonferroni correct Mann-Whitney U test. Since there are six pairs of comparisons in the analysis, the new level of significance is 0.05/6 =0.008. According to the test results, it was determined that the difference was caused by the nurses working in the pediatric

Table 1: Nurses' challenges for caring children with intellectual disabilities during hospitalization (N=94)

Challenges	Mean±SD
1. Communicating with the child	2.48 ± 0.71
2. Not fully able to understand the child's symptoms	2.28±0.67
3. Taking the child's history	2.28±0.83
4. Determining the situations that child likes/dislikes	2.38±0.60
5. Child having unpredictable behaviors (repetitive and aggressive behaviors, etc.)	2.52±0.69
6. Family attitude (collaborative/non-supportive)	2.21±0.77
7. Family not having enough information about the child's disability	2.20±0.63
8. Family members not accepting the child's disability	2.04±0.81
9. Role conflict between family and healthcare professionals in providing care	2.17±0.68
10. Interventions by family members making the care process difficult-Family members interfering with the care process	2.21±0.65
11. Unwillingness of team members to provide care for the child	1.88±0.77
12. Team members avoiding talking to family members	1.79±0.76
13. Fear of hurting the child while providing care	2.04±0.67
14. Lack of experience in providing care for a child with intellectual disabilities	2.07±0.76
15. Lack of knowledge about providing care a child with intellectual disabilities	2.16±0.70
16. Feeling inadequate in providing care for a child with intellectual disabilities	2.14±0.74
17. Absence of a social worker in the institution	2.17±0.94
18. Absence of a psychologist in the institution	2.10±0.97
19. Inadequate legal regulations/procedures for providing care for a child with intellectual disabilities	2.45±0.86
20. Very short service visitation periods	1.97±0.93
21. Having not appropriate physical environment (quiet, with less stimulus) for a child with intellectual disabilities	2.60±0.80
22. Inadequate communication between nurses	1.88±0.80
23. Absence of a primary physician responsible for the child's treatment	2.27±0.96
24. Making unnecessary interventions	2.00±0.80
25. Having high patient-nurse ratio	3.15±0.81
26. Having limited time while caring for a child with intellectual disabilities	3.01±0.81
27. Lack of guidelines for the care of a child intellectual disabilities	2.98±0.80

SD: Standard Deviation

Table 2: Evaluation of challenges factors scores according to sociodemographic characteristics of nurses (N=94)

Variables				Nurses' Challenges for Caring Children with Intellectual Disabilities During Hospitalization			
				Patient and family related challenges score	Nurses related challenges score	System related challenges score	Total score
		n	%	Mean±SD	Mean±SD	Mean±SD	Mean±SD
Age	20-29 years	47	50.0	22.78±4.19	11.35±3.56	26.00±5.76	60.14±0.28
	30-39 years	21	22.3	22.57±3.15	11.85±0.69	27.85±7.22	62.28±8.71
	40 years an above	26	27.7	24.66±4.93	13.00±4.00	27.33±8.14	65.00±16.82
	Test value			*χ2: 1.292*	χ2: 0.615	χ2: 0.200	χ2: 0.058
	**p*			*p: 0.524*	p: 0.735	p: 0.905	p: 0.972
Gender	Female	92	97.9	22.75±4.16	11.96±3.29	26.44±5.86	61.16±10.63
	Male	2	2.1	24.00±8.48	17.50±0.70	32.00±1.41	73.50±10.60
	Test value			*U: 85.500*	*U: 10.000*	*U: 32.000*	U: 28.000
	***p*			*p: 0.864*	*p: 0.031**	*p: 0.115*	p: 0.093
Education level	Associate Degree	8	8.5	24.00±2.32	10.37±2.55	23.25±3.95	57.62±7.22
	Undergraduate Degree	54	57.4	22.16±4.80	12.14±3.78	26.42±6.14	57.74±11.87
	Graduate Degree	32	34.0	23.50±3.30	12.40±2.65	27.62±5.56	63.53±9.14
	Test value			*χ2: 4.253*	*χ2: 3.233*	*χ2: 4.573*	χ2: 3.600
	**p*			*p: 0.119*	*p: 0.199*	*p: 0.102*	p: 0.165
Total employment duration in the profession	0-5 years	35	37.2	22.54±4.39	11.36±3.69	25.27±6.19	59.18±10.51
	6-10 years	24	25.5	22.25±2.76	11.62±2.06	26.12±5.02	60.00±7.23
	11 years and above	35	37.2	25.00±4.30	12.60±2.96	30.80±7.49	68.40±13.01
	Test value			*χ2: 4.699*	*χ2: 3.428*	*χ2: 0.324*	χ2: 1.172
	**p*			*p: 0.095*	*p: 0.180*	*p: 0.850*	p: 0.557
Employment duration as a pediatric nurse	0-5 years	52	55.3	22.26±3.78	11.46±3.18	25.60±5.65	59.33±9.13
	6-10 years	15	16.0	22.80±3.34	11.40±2.50	28.00±7.38	62.20±9.73
	11 years and above	27	28.7	25.75±4.57	13.00±3.26	29.25±7.67	68.00±14.98
	Test value			*χ2: 1.316*	*χ2: 5.802*	*χ2: 0.152*	χ2: 0.625
	**p*			*p: 0.518*	*p: 0.050**	*p: 0.927*	p: 0.732
Hospital type they work in	Public hospital	77	81.9	23.47±3.72	12.00±2.94	27.39±6.34	62.76±10.01
	Private/foundation hospital	17	18.1	19.33±3.51	9.66±3.05	22.66±4.04	51.66±8.14
	Test value			*U: 637.000*	*U: 572.000*	*U: 530.000*	U: 592.500
	***bp*			*p: 0.863*	*p: 0.415*	*p: 0.220*	p: 0.542
Unit they work in	Pediatric internal medicine/ surgery	53	56.4	23.71±4.73	12.60±3.72	27.60±5.90	63.92±12.21
	Pediatric intensive care	26	27.7	21.57±2.77	11.65±2.57	25.57±4.80	58.80±6.06
	Pediatric oncology	8	8.5	20.62±3.96	9.87±3.22	21.12±3.44	51.62±5.60
	Other	7	7.4	22.57±3.15	12.28±2.21	28.57±7.89	63.42±9.21
	Test value			*t: 4.892*	*t: 1.790*	*t: 2.316*	*t: 3.751*
	**p*			*p: 0.027**	*p: 0.181*	*p: 0.128*	*p: 0.050*
The frequency of care for the child with intellectual disabilities	Every day	17	18.1	22.00±4.12	11.00±3.05	27.28±9.03	60.28±14.27
	1-2 days a week	23	24.5	21.60±4.33	11.40±3.64	28.60±4.82	61.60±11.05
	3-4 days a week	17	8.1	22.40±2.79	11.20±3.03	23.20±4.08	56.80±5.97
	1-2 days a month	30	31.9	24.50±3.39	12.50±2.58	28.16±5.07	65.16±8.54
	Test value			*t: 2.393*	*t: 5.906*	*t: 2.559*	*t: 1.186*
	**p*			*p: 0.664*	*p: 0.206*	*p: 0.634*	*p: 0.880*
The training received related to the care of the child with intellectual disabilities	Yes	24	25.5	22.95±3.88	11.70±2.99	26.70±6.23	61.37±10.34
	No	70	74.5	22.71±4.34	12.21±3.48	26.51±5.77	61.44±10.93
	Test value			*U: 800.000*	*U: 789.500*	*U: 809.500*	*U: 802.500*
	***p*			*p: 0.728*	*p: 0.660*	*p: 0.791*	*p: 0.745*
The unit where they received training related to the care of the child with intellectual disabilities (N= 24)	University	14	58.3	23.71±3.93	11.92±3.02	27.35±6.12	63.00±10.88
	In-house trainings	8	33.3	22.12±4.18	11.50±3.50	23.62±5.23	57.25±9.80
	Other	2	8.3	21.00±1.41	11.54±3.46	34.50±3.53	66.50±4.94
	Test value			*t: 1.544*	*t: 0.275*	*t: 5.060*	*t: 1.533*
	**p*			*p: 0.462*	*p: 0.872*	*p: 0.080*	*p: 0.465*
Finding the knowledge about the care of a child with intellectual disabilities sufficient	Yes	40	42.6	22.12±3.56	10.65±2.69	25.75±5.62	58.52±8.70
	No	54	57.4	23.25±4.60	13.14±3.42	27.16±6.00	63.57±11.63
	Test value			*U: 876.500*	*U: 629.000*	*U: 900.000*	*U: 783.000*
	***p*			*p: 0.118*	*p: 0.001**	*p: 0.168*	*p: 0.023**
The presence of a person with intellectual disability in the family	Yes	4	4.3	*24.00±3.16*	*10.50±0.57*	*23.75±1.89*	*58.25±5.25*
	No	90	95.7	*22.72±4.25*	*12.15±3.41*	*26.68±5.95*	*59.28±10.90*
	Test value			*U: 139.500*	*U: 114.000*	*U: 125.000*	*U: 149.500*
	***p*			*p: 0.446*	*p: 0.214*	*p: 0.302*	*p: 0.567*

*Kruskal Wallis Test; **Mann Whitney U Test; SD: Standard Deviation

internal medicine units and the difference was statistically significant (p<0.001).

The total mean score of the nurses collected from NC-CCIDS was 61.42±10.73. It was found that the mean score of the NC-CCIDS Child and Family-related challenges sub-dimension was 22.77±4.21, the mean score of the NC-CCIDS Nurses-related challenges sub-dimension was 12.08±3.35 and the mean score of NC-CCIDS System-related challenges sub-dimension was 26.56±5.86.

As a result of the analysis, variables that statistically and significantly affect the challenges that nurses face while providing care to a child with ID (gender, employment duration as a pediatric nurse, the unit they work in), and find the knowledge about the care of a child with ID sufficient were included in the regression model (Table 3). According to the association between variables in multiple regression analysis, the effect of nurses' introductory characteristics on the challenges they face while caring for a child with ID was specified as a model. According to the model, the challenges faced by nurses who are male, nurses working as pediatric nurses for 11 years or more, nurses working in pediatric internal medicine and surgical units, and nurses who do not find the level of knowledge about caring for a child with ID sufficient, are increasing. The variables in the model explain 13.5% of the challenges faced while caring for a child with ID and are statistically significant. In addition, it was reflected that the unit where nurses in the model work significantly affect the frequency of challenges faced while caring for a child with ID (p<0.05, Table 3).

DISCUSSION

The nurses reported that they had various challenges while caring for a child with an ID in the hospital. These challenges experienced by the nurses are discussed under three headings: patient and family-related challenges, nurses-related challenges, and system-related challenges.

Child and family-related challenges

Most of the nurses indicated that they had some challenges in providing care due to the situation of the child and the family. It was found that nurses generally have problems in communicating with the child, taking the history of the child, determining the symptoms, and managing the child's challenging behaviors.

Communication with children

In this study, one of the most experienced challenges faced by nurses was communication with the children. The nurses stated that they had challenges while they were taking the health histories of children, determining their symptoms and what they like or do not like. Similarly, communication is stated as an important problem by mothers of children with ID (14,15) and nurses in the literature (15). It was found that communication difficulties with these children were related to the lack of education and experience of nurses (16,17). As a result of the studies, it is stated that training nurses starting from undergraduate education will increase the nurse's self-confidence in care and the quality of care of children. In addition, it has been emphasized the importance of teaching nurses about communication strategies with children with ID and collaboration with other professionals with in-service training (18,19).

Table 3: The Level of prediction of nurses' descriptive characteristics of challenges faced while caring for a child with intellectual disabilities (N=94)

	The Nurses' Challenges for Care of Children with Intellectual Disabilities Scale						
	Model 1						
	Unstandardized Coefficients β	Coefficients Std. Error	Standardized Coefficients Beta	*t*	*p*	95% Confidence Interval	
						Lower	Upper
Gender[a]	10.729	7.374	0.145	*1.455*	*0.149*	-3.924	25.382
Employment duration as a pediatric nurse [b]	-2.648	2.495	-0.112	*-1.061*	*0.291*	-7.606	25.382
Unit they work for [c]	5.673	2.289	0.264	*2.479*	*0.015*	1.125	10.220
Finding the knowledge about the care of a child with intellectual disabilities sufficient [d]	2.761	2.303	0.128	*1.199*	*0.234*	-1.815	7.337
R			*0.367*				
***R*²**			*0.135*				
F			*3.465*				
p			*0.011*				
Durbin Watson (1.5-2.5)			*1.947*				

[a]The female gender is coded as "0" and the male is coded gender as "1".
[b]Employment periods of 10 years or less are coded as "0" and 11 years or above are coded as "1".
[c]Nurses working in pediatric intensive care, pediatric oncology and other units were coded as "0" and nurses working in pediatric internal and surgical units are coded as "1".
[d]Nurses who find their level of knowledge sufficient were coded as "0" and those who do not find it sufficient as "1".

Unpredictable /challenging behavior of children

In this study, nurses also indicated that they had challenges in handling unpredictable/challenging behaviors and were afraid of harming the child while providing care. This finding is supported by the existing kinds of literature which identified nurses experiencing fear and anxiety while providing care to these children (11,12). When the child is hospitalized, situations that change the child's routines may cause an increase in these challenging behaviors (16,20). The lack of knowledge and experience in controlling these behaviors are the reason for nurses' fears and concerns (12,16) and this is consistent with the findings of our study.

Mothers' approach

Nurses reported that the mothers' approach is a factor affecting the care process in our study. Factors such as the family's attitude (collaborative/non-supportive), the family's insufficient knowledge about the child's disability, the family members not accepting the child's disability, the conflict of roles between the family and healthcare workers about providing care, the interventions of the family members that make the care process difficult were the challenges experienced by the nurses while caring for the child with ID. In the qualitative study of Peter Lewis; "Nurse–parent relationships" was determined as an important theme. It is emphasized that establishing a good relationship with the family will make the nurse feel more self-confident in caring for the child with ID (20).

Nurses-related challenges

More than half of the nurses in our study felt inadequate in caring for a child with ID. They thought that their knowledge and experience were insufficient to provide care for a child with ID. In the other studies, nurses indicated that they did not consider themselves competent and this situation was due to a lack of knowledge and experience (16,17,21). When experience and education increase, nurses' self-confidence increases, and they reflect a more positive attitude toward the children with ID and their families (8,20).

System-Related Challenges

The nurses experienced challenges in the care of the child with ID because of the working conditions, other members of the team, and the health policies of the institution in this study.

Working Conditions

Nurses stated that having limited time when caring for a child with ID and caring for a high number of patients has caused challenges in our study. The nurse shortage is still an important issue in our country. The treatment and care of children with ID may take longer than usual. Because the nurse does not have enough time, they might avoid caring for these children (16,20). Different studies in the literature have also shown that caring for a child with ID requires a longer time and the nurse does not have enough time to communicate with children or families (14,16,22,23). In addition, nurses may have difficulty managing some difficult situations while caring for them due to the lack of special educators or other team members (8,24). Units should have a senior ID nurse for advice. Such experienced nurses can provide information and can support health care staff (24).

Team

The nurses stated that the absence of psychologists or social workers, and specialists about ID in the team caused challenges arising from the system. Caring for a child with ID requires a team approach. The importance of having a psychologist, social worker, doctor, and special educator on the team is prominent. However, team members are insufficient in our country. There are not any nurses or other health workers specially trained in this field in the hospitals. Intellectual disabilities liaison nurses might bridge the relationship between nurses and families of children with ID (20). The care provided by the multidisciplinary team will affect the quality of care given to the children with ID and their families.

Legal and Ethical Procedures

The nurses also indicated that guidelines and legal regulations/ procedures for the care of children with ID are inadequate and negatively affect the care. There is no guideline that can be used by nurses who care for these children (25). In the study of Oulton et al., nurses indicated the lack of government and institutional policies for special needs children as situations that negatively affect care (16).

CONCLUSION

In this study, communication with the children was one of the most experienced challenges and another one is feeling inadequate while providing care for a child with ID by nurses. This study demonstrates that key areas of need are maximizing the strategies that nursing staff use to care for children with ID in the hospital, determining individualized strategies, especially to foster communication with children with ID and their families, developing guidelines, and coordinating with other healthcare professionals. Additionally, since the care of children with ID takes more time, the workload of the nurse and the number of patients should be considered.

How might this information affect nursing practice?

Previous research emphasized limited knowledge about ID among healthcare professionals and proposed that increased knowledge would lead to an increased quality of care. This study shows the areas where pediatric nursing staff have difficulty caring for children with ID. More education regarding caring for children with ID is needed in graduate and undergraduate programs as well as continuing education at the hospital. Additionally, it is seen that multidisciplinary approaches to caring for children with ID are necessary. So, this study identifies that there is a need for training, institutional arrangements, and policies that will enable nurses working in pediatric wards to increase the quality of care for children with ID.

Limitations of the study

The limitation of the study is the difficulty in reaching the required number of nurses due to the collection of data during the Covid-19 period.

Ethics Committee Approval: This study was approved by the ethics committee of the University Social Sciences Ethics Evaluation Committee (No:2020.333.IRB3.120; 5 September 2020)

Informed Consent: Written consent was obtained from the participants.

Peer Review: Externally peer-reviewed.

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Determination of Nursing Student's Attitudes Towards Refugees and Affecting Factors

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ABSTRACT

Objective: This study was carried out in a descriptive and cross-sectional type to determine the attitudes of nursing students towards refugees and the factors affecting them.
Materials and Methods: The study consisted of 1665 nursing students studying in the three universities in Istanbul province in the 2020-2021 academic year. The sample of the study consisted of 646 students determined by power analysis. Permissions were obtained before the study data were collected. Data were collected by Students Data Form and the Attitude Scale Regarding Syrian Refugees.
Results: The average age of students was 20.07±1.68 years, and 84.8% were women. When the sub-dimension means of Attitude Scale Regarding Syrian Refugees were examined, the mean scores of the students were recognized as follows; 3.52±0.89 defended the rights of Syrian refugees, 3.45±0.96 had negative opinions about Syrian refugees, 3.32±0.96 supported finding radical solutions for Syrian refugees, 2.76±1.20 helped the Syrian refugees 2.47±0.69 agreed to find the moderate solutions for Syrian refugees. Examination of individual characteristics such as age, gender, number of siblings, education level, parents' education level and place of residence, factors such as job anxiety in the future, traveling safely, having refugee friends, presence of refugees in the family, disaster management education, the Attitude Scale Regarding Syrian Refugees sub-dimension, revealed a significant difference between the dimension mean scores ($p<0.05$).
Conclusion: It was determined that the attitudes of nursing students toward Syrian refugees were partially negative and that some individual characteristics and influencing factors were effective in their attitudes toward refugees.

Keywords: Attitude, migration, nursing students, refugee

INTRODUCTION

Migration, which occurs due to people's desire to improve their living conditions and events (such as natural events, wars, internal conflicts, etc.), makes the emergence of new problems inevitable for individuals depending on biophysiological, environmental, psychological, sociocultural, and political-economic factors (1-3). In this context, "a person who seeks asylum in another country and whose request is granted by that country" is defined as a "refugee" (4). There are many refugees in Turkey due to its significant geographical location and its sociocultural structure as a country that attracts a large number of immigrants. Especially the "migration crisis" that started due to the civil war in Syria rendered Turkey a very strategic country (emigration, migration, etc.) (4,5).

In April 2011, Syrian refugees were incorporated into Turkish society as a social group with the "open door policy" implemented by Turkey for Syrian refugees (2). The fact that refugees change the socio-demographic structure in places where they are densely settled is seen as one of the most critical social factors (6). It is seen that the negative attitude towards refugees has increased in society, especially in terms of cultural structure and the economic burden they pose (7). It is highly important to determine the attitude of society towards refugees in order to minimize the bio-physiological, psychological, socio-cultural, environmental, and political-economic effects due to the increasing number of refugees living in Turkey (4,8).

In the healthcare system, nurses, who are the healthcare professionals that refugees first encounter, need to provide

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nursing care in line with the philosophy of the profession, ethical principles, ethical codes, and professional values (3). Negative attitudes of nurses who will provide care to refugees may negatively affect the quality of healthcare services (9,10). Therefore, all members of healthcare professionals need to possess the necessary knowledge and skills to provide refugees with the healthcare they need. The curricula of nursing students, who will have a direct encounter with the positive and negative situations caused by migration and refugees, especially after graduation, need to include positive attitudes and behaviours as well as knowledge and skills to provide healthcare to individuals, families, and communities coming from different cultures. There are a limited number of studies on this subject in the literature. In this context, this study planned to determine the attitudes of nursing students toward refugees and the factors affecting them.

MATERIALS AND METHODS

Aim and type of the study

This descriptive and cross-sectional study was conducted to determine the attitudes of nursing students toward refugees and the factors affecting them.

Questions of the study

1. What are students' individual characteristics and factors affecting their attitudes towards refugees?
2. What is the level of the attitudes of the students towards refugees?
3. What are the factors affecting the attitudes of students towards refugees?
4. What are the effects of the individual characteristics of the students and the factors affecting their attitudes towards refugees on their attitudes towards refugees?

Participation of the study

The study consisted of a total of 1665 nursing students studying in the nursing faculties and nursing departments of three universities (2 state universities, and 1 foundation university) in Istanbul in the 2020-2021 academic year. As a result of the power analysis performed with the data obtained at the end of the study using the G*Power 3.0.10 program, the power of the study was found to be 97% with the effect size (d=0.15) and 5% margin of error for a sample size of 646. The sample size was determined as 646 students.

Data collection tools

The data of the study were collected using the Student Information Form and the Attitude Scale Regarding Syrian Refugees.

Student Information Form: In line with the literature (2, 3, 11-13), the form consisted of two parts. The first part consisted of 12 questions regarding the age, gender, class, and marital status of the students, the number of their siblings, their employment and income status, their health insurance, the educational status of their parents, the place where they live, and the region of Turkey where they spent the most of their lives. The second part consisted of 17 questions in total, including 7 questions related to their job anxiety towards the future, their sense of safety, and the presence of refugees in their families, in the place where they live, and as their friends.

Attitude Scale Regarding Syrian Refugees: Çimen et al.(12) developed the questionnaire in 2018 in order to evaluate the attitudes of university students towards Syrian asylum seekers. It was a five-point Likert-type scale with "Strongly agree"=5 points, "Agree"= 4 points, "Undecided"= 3 points, "Disagree"= 2 points, and "Strongly disagree"= 1 point. Fourteen of the 28 propositions (4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 20, 24) in the Attitude Scale Regarding Syrian Refugees were evaluated within the scope of the reverse question and the scoring of these propositions was reversed. As a result of various analyses, items were grouped under 5 factors. Factor dimensions were as follows; Factor 1: Having a negative opinion about Syrian refugees (reverse items) consisted of items 4, 5, 6, 7, 8, 9, 10, 11, and 12 and the highest score that could be obtained was 45. Factor 2: Finding radical solutions (against) Syrian refugees consisted of items 13, 14, 15, and 24, and the highest possible score was 20. Factor 3: Finding moderate solutions for (in favour of) Syrian refugees consisted of items 20, 21, 22, 23, and 25, and the highest possible score was 25. Factor 4: Defending the rights of Syrian refugees consisted of 16, 17, 18, and 19 and the highest possible score was 25. Factor 5: Providing assistance to Syrian refugees consisted of the item, 27, and the highest possible score was 10. The Cronbach's Alpha value of the original scale was determined as 0.901 and this value indicated that the scale was a sufficiently reliable tool. Cronbach's Alpha values (0.878, 0.775, 0.691, 0.750, and 0.763) were taken into consideration in evaluating the internal consistency of the 5 factors determined by factor analysis (12). In this study, the reliability coefficients of the scale were found to be quite high with respective values of 0.938; 0.805; 0.724; 0.851; 0.804.

Procedures of the study

Data collection forms were delivered online to nursing students through nursing faculties and nursing departments of three universities. Students were informed about the study on the first page of the data collection forms. Before starting the study, students were asked to press the "I approve" button/option if they were willing to participate in the study. It took an average of 15 minutes for the students to answer the questions of the study. When the determined sample was achieved, the responsible researcher accessed these data through the "Google Form".

Ethical consideration

Institutional permissions and ethics committee approval was obtained (Date: 19/02/2020 Number: 14901). The authors who developed the Attitude Scale Regarding Syrian Refugees to be used in the study were contacted electronically and their written consent was obtained. The data were collected by paying attention to the willingness and volunteering of the students regarding participation in the study.

Statistical analysis

The findings of the study were evaluated with the SPSS 24 program. The descriptive statistical methods of mean, standard deviation, frequency, and percentage were preferred. Mann-Whitney U test and Kruskal-Wallis H methods were applied in two independent group analyses, which were within the scope of parametric methods Bonferroni correction was used for pairwise comparisons of variables with significant values in groups of three or more. Spearman's correlation coefficient was applied for values that did not exhibit a normal distribution. Significance was evaluated at 0.05 level.

RESULTS

Findings related to individual characteristics of students and factors affecting their attitudes toward refugees

It was found that the mean age of the students who were included in the study was 20.07±1.68 (years), 52.8% of them were in the 19-20 age group, 84.8% of them were female, 38.8% of them had 2 siblings, 99.2% of them were single, 63.9% of their mothers and 57.1% of their fathers were graduates of primary/secondary school, 81.3% of them had health insurance, and 88.4% of them lived with their families. It was found that 69.3% of the students had job anxiety about the future, 50.2% (n=324) felt safe when traveling alone, 98.3% had no refugees in their families and 51.7% had refugees where they lived. It was determined that 88.1% of the students did not have refugee friends, 82.5% of them did not receive disaster management training, and 99.8% of them did not receive migration management training.

Findings related to the mean scores of the nursing students' Attitude Scale Regarding Syrian Refugees

According to Table 1, when the mean scores of the sub-dimension of the Attitude Scale Regarding Syrian Refugees were analyzed according to the majority groups, it was seen that the mean scores were 3.52±0.89 for defending the rights of Syrian refugees, 3.45±0.96 for having a negative opinion about Syrian refugees, 3.32±0.96 for finding radical solutions for Syrian refugees, 2.76±1.20 for helping Syrian refugees and 2.47±0.69 for finding moderate solutions for Syrian refugees.

Findings related to the comparison of students' attitudes towards Syrian refugees according to their individual characteristics and factors affecting their attitudes toward refugees:

According to Table 2, the mean score of the Attitudes towards Syrian Refugees Scale sub-dimension of finding radical solutions for Syrian refugees of the students aged 23 years and older was higher than that of the students aged 18 years and younger (χ^2=10.944; p=0.012). There was a significant difference between the mean scores of 19-20, 23 years old, and older students on the Attitudes towards Syrian Refugees Scale and those who were 18 years old and younger (χ^2=8.189; p=0.042). Those aged 23 years and older had a statistically significant difference in the mean score of the Attitudes towards Syrian Refugees Scale, defending the rights of Syrian refugees sub-dimension compared to those aged 18 years and younger (χ^2=10.234; p=0.017). According to the gender variable, the mean scores of the Attitudes towards Syrian Refugees Scale sub-dimension of finding radical solutions for Syrian refugees (Z=-3.331; p=0.001), finding moderate solutions for Syrian refugees (Z=-3.149; p=0.002) and helping Syrian refugees (Z=-2.544; p=0.001) were higher. According to the number of siblings, the mean scores of those with 3, 4, and more siblings on the Attitude Scale towards Syrian Refugees sub-dimension of finding radical solutions for Syrian refugees were significantly higher than those with 2 siblings (χ^2=15.689; p=0.001). Those with 4 or more siblings had higher mean scores in the Attitudes towards Syrian Refugees Scale and found moderate solutions for Syrian refugees than those with 2 siblings (χ^2=10.990; p=0.012). Those whose mothers were literate or illiterate had higher mean scores in the Attitudes towards Syrian Refugees Scale sub-dimension of finding radical solutions for Syrian refugees than those with primary/secondary school, high school, and university degrees (χ^2=13.225; p=0.004). Those whose mothers were literate or illiterate had higher mean scores in the sub-dimension of the Attitudes towards Syrian Refugees Scale, finding moderate solutions for Syrian refugees (χ^2=12.727; p=0.005). Those whose fathers were university graduates had higher mean scores in the Attitudes towards Syrian Refugees Scale for finding moderate solutions for Syrian refugees than those whose fathers were high school graduates (χ^2=13.225; p=0.004). Those who had health insurance had higher mean scores in the Attitudes towards Syrian Refugees Scale, defending the rights of Syrian refugees sub-dimension (Z=-2.320; p=0.020). Those who lived with friends had higher mean scores in the Attitudes towards Syrian Refugees Scale sub-dimension of finding moderate solutions for Syrian refugees (χ^2=10.692; p=0.030). The mean score of the Attitudes towards Syrian Refugees Scale, defending the rights of Syrian refugees sub-dimension score of those living with friends was higher than those living alone (χ^2=9.523; p=0.049). It was determined that the mean score of the Attitudes towards Syrian Refugees Scale, the sub-dimension of helping Syrian refugees of those living with friends was higher than those living with relatives and alone (χ^2=18.428; p=0.001).

Table 1: Distribution of mean scores of the Attitude Scale of the nursing students toward Syrian refugees (N=646)

Scale		Mean±S.D.	Median	Min.	Max.
Attitude Scale Regarding Syrian Refugees	Having a negative opinion about Syrian refugee	3.45±0.96	3.6	1.0	5.0
	Finding radical solutions for Syrian refugees	3.32±0.96	3.3	1.0	5.0
	Finding moderate solutions for (In favour of) Syrian refugees	2.47±0.69	2.4	1.0	5.0
	Defending the rights of Syrian refugees	3.52±0.89	3.8	1.0	5.0
	Helping Syrian refugees	2.76±1.20	3.0	1.0	5.0

Mean: Mean, S.D.: Standard Deviation, Min: Minimum Max: Maximum

Table 2: Comparison of the Mean Scores of the students on the Attitude Scale Regarding Syrian Refugees Based on their individual characteristics (N=646)

Variable (N=646)	n	Having a Negative Opinion about Syrian Refugees		Finding Radical Solutions for Syrian Refugees		Finding Moderate Solutions for Syrian Refugees		Defending the Rights of Syrian Refugees		Helping Syrian Refugees	
		Mean±SD	Median	$\bar{X}$±S.D.	Median	Mean±SD	Median	Mean±SD	Median	Mean±SD	Median
Age groups											
≤18 (1)	96	3.57±1.04	3.8	3.15±0.99	3.1	2.33±0.61	2.4	3.35±0.95	3.6	2.67±1.18	2.8
19-20 (2)	341	3.42±0.93	3.6	3.34±0.91	3.3	2.49±0.65	2.6	3.54±0.85	3.7	2.73±1.16	3.0
21-22 (3)	167	3.54±0.93	3.6	3.29±1.04	3.3	2.47±0.79	2.5	3.52±0.91	3.7	2.83±1.23	3.0
≥23 (4)	42	3.09±0.98	3.1	3.64±0.82	3.8	2.63±0.70	2.6	3.75±0.96	3.8	2.95±1.43	3.0
*Statistical analysis**		χ^2=10.944 **p=0.012 [1,2,3-4]**		χ^2=8.436 **p=0.039 [1-4]**		χ^2=8.189 **p=0.042 [1-2,4]**		χ^2=10.234 **p=0.017 [1-4]**		χ^2=1.960 p=0.581	
Gender											
Female	548	3.41±0.93	3.6	3.38±0.91	3.3	2.51±0.65	2.6	3.54±0.87	3.8	2.81±1.18	3.0
Male	98	3.68±1.08	3.9	2.99±1.11	3.0	2.27±0.79	2.2	3.39±0.99	3.6	2.49±1.29	2.3
Statistical analysis		Z=-3.144 **p=0.002**		Z=-3.331 **p=0.001**		Z=3.149 **p=0.002**		Z=-1.331 p=0.183		Z=-2.544 **p=0.011**	
Number of siblings											
One sibling (1)	30	3.44±0.91	3.7	3.33±0.95	3.4	2.47±0.64	2.5	3.52±0.69	3.7	2.70±0.95	3.0
2 siblings (2)	250	3.58±0.90	3.7	3.15±0.92	3.2	2.38±0.63	2.4	3.52±0.85	3.8	2.68±1.16	3.0
3 siblings (3)	172	3.34±0.98	3.4	3.41±0.95	3.5	2.45±0.67	2.5	3.48±0.94	3.8	2.77±1.24	3.0
≥4 siblings (4)	194	3.39±1.00	3.4	3.48±0.98	3.5	2.61±0.76	2.6	3.56±0.94	3.8	2.87±1.24	3.0
Statistical analysis		χ^2=6.565 p=0.087		χ^2=15.689 **p=0.001 [2-3,4]**		χ^2=10.990 **p=0.012 [2-4]**		χ^2=1.326	p=0.723	χ^2=2.183	p=0.535
Mother's education level											
Literate/illiterate (1)	102	3.36±1.03	3.4	3.55±0.93	3.8	2.68±0.72	2.6	3.59±0.97	3.8	2.79±1.12	3.0
Primary/Secondary (2)	412	3.48±0.95	3.7	3.31±0.92	3.3	2.42±0.67	2.4	3.52±0.85	3.8	2.74±1.21	3.0
High School (3)	98	3.36±0.98	3.4	3.13±1.07	3.1	2.48±0.72	2.5	3.44±1.01	3.8	2.86±1.23	3.0
University (4)	34	3.65±0.70	3.7	3.13±1.05	3.3	2.39±0.54	2.5	3.54±0.87	3.8	2.59±1.27	3.0
Statistical analysis		χ^2=3.397 p=0.334		χ^2=13.225 **p=0.004 [1-2,3,4]**		χ^2=12.727 **p=0.005 [1-2]**		χ^2=2.757 p=0.431		χ^2=1.612 p=0.657	
Father's education level											
Literate/illiterate (1)	45	3.41±1.21	3.6	3.38±0,91	3.5	2.50±0.76	2.5	3.31±1.13	3.8	2.66±1.12	2.5
Primary/Secondary (2)	369	3.43±0.97	3.6	3.36±0,95	3.3	2.50±0.66	2.5	3.53±0.86	3.8	2.78±1.20	3.0
High School (3)	162	3.58±0.85	3.7	3.19±0,99	3.3	2.33±0.72	2.4	3.53±0.84	3.8	2.73±1.22	3.0
University (4)	70	3.29±0.93	3.4	3.36±0,95	3.3	2.61±0.67	2.6	3.56±0.98	3.8	2.79±1.25	3.0
Statistical analysis		χ^2=4.320 p=0.229		χ^2=2.959 p=0.398		χ^2=9.854 **p=0.020 [3-4]**		χ^2=1.344	p=0.719	χ^2=0.738	p=0.864
Place of residence											
With family (1)	571	3.43±0.94	3.6	3.34±0.93	3.3	2.48±0.65	2.4	3.52±0,89	3.8	2.76±1.16	3.0
With friends (2)	16	3.35±1.04	3.4	3.14±1.25	3.3	2.86±0.88	2.8	3.91±0,75	3.9	3.66±1.29	3.3
With relatives (3)	12	3.90±0.77	4.1	2.85±0.99	3.0	2.02±0.63	2.1	3.43±0,74	3.6	1.83±1.01	1.5
Alone (4)	8	3.81±0.77	3.9	2.91±1.29	3.3	2.15±0.54	2.4	2.65±0,96	2.5	1.88±1.09	1.5
In the dormitory (5)	39	3.53±1.21	3.9	3.15±1.05	3.0	2.47±1.01	2.4	3.53±0,97	3.6	2.91±1.51	3.0
Statistical analysis		χ^2=5.503 p=0.240		χ^2=6.344 p=0.175		χ^2=10.692 **p=0.030 [2-3]**		χ^2=9.523 **p=0.049 [2-4]**		χ^2=18.428 **p=0.001[2-3,4]**	

*"Mann-Whitney U" test (Z-table value) was used to compare the measurement values of two independent groups in data that did not have a normal distribution, and "Kruskall-Wallis H" test (χ2-table value) statistics were used to compare three or more independent groups.

According to Table 3, it was found that the mean score of the Attitude Scale towards Syrian Refugees sub-dimension of finding a moderate solution for Syrian refugees was higher among the students who did not have job anxiety about the future (Z=-2.894; p=0.004). Those who felt safe when traveling alone had higher mean scores in the Attitude Scale towards Syrian Refugees sub-dimension of defending the rights of Syrian refugees (Z=-2.469; p=0.014). Similarly, it was found that the mean score of the Attitudes towards Syrian Refugees Scale sub-dimension of defending the rights of Syrian refugees of those who felt safe traveling alone was higher than those who did not feel alone (Z=-2.469; p=0.014). Those who had refugees in their families had higher mean scores in the sub-dimension of finding moderate solutions for Syrian refugees in the Attitudes towards Syrian Refugees Scale (Z=-2.349; p=0.019). Those who had refugees in their families had higher mean scores in the sub-dimension of helping Syrian refugees in the Attitude towards Syrian Refugees Scale (Z=-3.200; p=0.001). It was determined that the mean score of the sub-dimension of defending the rights of Syrian refugees in the Attitudes towards Syrian Refugees Scale was higher for those who had refugees in their place of residence (Z=-2.078; p=0.038). Those who had

Table 3: Comparison of the students' mean scores on the Attitude Scale Regarding Refugees Based on the Factors affecting the attitudes of the students towards Syrian refugees (N=646)

Variable (N=646)	N	Having a Negative Opinion about Syrian Refugees		Finding Radical Solutions for Syrian Refugees		Finding Moderate Solutions for Syrian Refugees		Defending the Rights of Syrian Refugees		Helping Syrian Refugees	
		Mean±SD	Median	Mean±SD	Median	Mean±SD	Median	Mean±SD	Median	Mean±SD	Median
Work anxiety in the future											
Yes	448	3.45±0.98	3.6	3.32±0.97	3.3	2.41±0.67	2.4	3.47±0.94	3.8	2.71±1.19	3.0
No	198	3.47±0.89	3.6	3.31±0.93	3.3	2.60±0.71	2.6	3.62±0.78	3.8	2.87±1.22	3.0
*Statistical analysis**		Z=-0.142 p=0.887		Z=-0.007 p=0.994		Z=-2.894 **p=0.004**		Z=-1.079 p=0.281		Z=-1.494 p=0.135	
Travelling alone safely											
Yes	324	3.43±0.85	3.5	3.27±0.93	3.3	2.48±0.69	2.4	3.62±0.81	3.8	2.81±1.17	3.0
No	322	3.48±1.05	3.7	3.36±0.98	3.3	2.46±0.69	2.4	3.42±0.96	3.6	2.71±1.23	3.0
Statistical analysis		Z=-1.418 p=0.156		Z=-1.052 p=0.293		Z=-0.523 p=0.601		Z=-2.469 **p=0.014**		Z=-0.995 p=0.320	
Refugee in the family											
Yes	11	3.01±1.02	2.8	3.25±1.39	3.5	2.96±1,04	3.4	3.93±1.26	4.6	4.00±1.26	4.0
No	635	3.46±0.95	3.6	3.32±0.95	3.3	2.46±0.68	2.4	3.51±0.88	3.8	2.73±1.19	3.0
Statistical analysis		Z=-1.760 p=0.078		Z=-0.086 p=0.932		Z=-2.349 **p=0.019**		Z=-1.957 p=0.051		Z=-3.200 **p=0.001**	
Refugee in the place of residence											
Yes	334	3.51±0.97	3.7	3.29±0.99	3.3	2.49±0.72	2.6	3.59±0.90	3.8	2.90±1.26	3.0
No	312	3.40±0.93	3.6	3.35±0.91	3.3	2.45±0.65	2.4	3.45±0.87	3.7	2.61±1.12	2.5
Statistical analysis		Z=-1.668 p=0.095		Z=-0.722 p=0.470		Z=-0.703 p=0.482		Z=-2.078 **p=0.038**		Z=-2,974 **p=0,003**	
Refugee friend											
Yes	77	3.30±1.00	3.3	3.48±1.02	3.5	2.68±0.75	2.6	3.75±0.94	3.8	3.25±1.29	3.0
No	569	3.47±0.95	3.6	3.29±0.94	3.3	2.44±0.68	2.4	3.49±0.88	3.5	2.69±1.17	2.7
Statistical analysis		Z=-1.237 p=0.216		Z=-1.433 p=0.152		Z=-2.737 **p=0.006**		Z=-2.570 **p=0.010**		Z=-3.651 **p=0.000**	

*"Mann-Whitney U" test (Z-table value) was used to compare the measurement values of two independent groups in data that did not have a normal distribution, and "Kruskall-Wallis H" test (χ2-table value) statistics were used to compare three or more independent groups.

refugees in their place of residence had higher mean scores in the sub-dimension of helping Syrian refugees in the Attitudes towards Syrian Refugees Scale (Z=-2.974; p=0.003). Those who had refugee friends had higher mean scores ($p<0.05$) in the Attitudes towards Syrian Asylum Seekers Scale sub-dimensions of finding moderate solutions for Syrian refugees (Z=-2.737; p=0.006), defending the rights of Syrian refugees (Z=-2.570; p=0.010), and helping Syrian refugees (Z=-3.651; p=0.000).

DISCUSSION

Turkey has been hosting refugees due to ongoing migration and as a result, various problems arise (11,14). In this context, the aim of the study was to determine whether university students, especially those studying in the field of healthcare, have a different attitude towards emerging problems.

In the study, it was determined that the mean score of the sub-dimension of having negative opinions about Syrian refugees in the Attitudes towards Syrian Refugees Scale was 3.45±0.96 (Table 1). The negative opinions and attitudes towards Syrian refugees mentioned in the study scale were due to the fact that some of the refugees violated the laws of the country, triggered terrorist incidents, and negatively affected the peace and security of the local people by being involved in various crimes (violence, theft, smuggling, etc.), and that this numerically large group posed a great risk to the socio-cultural and political-economic structure of the society (11,15,16). This findings of the study were consistent with the literature and were similar to other studies (2,12). It was determined that the mean score of the students in the sub-dimension of finding radical solutions for Syrian refugees was 3.32±0.96 in the Attitude Scale Regarding Syrian Refugees (Table 1). Among the radical methods mentioned in the study scale regarding refugees, it was stated that it was not right for refugees to leave their countries due to the problems in their own countries, that refugees need to go back there even though the problems in their own countries were still ongoing, that countries should not accept refugees and that each country should solve its own problems within itself, that refugees should be hosted only in camps and should not be allowed to disperse to other cities. In study (12), the fact that the sample remained undecided in finding radical solutions for Syrian refugees did not support the findings of the study. According to the study conducted by Sumer (16), it was observed that graduate program students did not agree with finding radical solutions for refugees. In almost every province of Turkey, Syrian refugees receive material and moral support while maintaining their lives. In this context, it can be stated that students who are engaged in migration studies do

not agree with radical solutions because they know first-hand the difficulties faced by refugees in their own studies.

In the study, it was seen that the mean score of the sub-dimension of finding moderate solutions for Syrian refugees in the Attitudes towards Syrian Refugees Scale was 2.47±0.69 (Table 1). The moderate solutions mentioned in the scale of the study regarding Syrian refugees were stated as developing policies for refugees to work and adapt to society by placing them throughout the country, granting citizenship rights, wanting to have a refugee neighbor, thinking that refugees could form a young labor force in the countries where they lived, and thinking that refugees needed to be sent back after the problem in their country were resolved (12). When this finding was compared with previous studies, in a similar study conducted in Istanbul, university students were undecided about the moderate solution suggestions that could be developed for Syrian refugees (2,12). According to the study conducted by Sumer (16), it was observed that students were able to develop solutions for refugees. Unlike other studies, this finding of the study could be explained by the difference between the views depending on the experiences related to refugees according to the geography of residence and the dimensions of the persons. It was found that the mean score of the sub-dimension of defending the rights of Syrian refugees in the Attitude Scale Regarding Syrian Refugees was 3.52±0.89 (Table 1). Those who defended the rights of Syrian refugees in the scale of the study stated that they needed to be regarded as guests in Turkey, that they were people escaping from persecution, and that they could stay as refugees as long as they wanted until the crisis in their country was resolved, that it was a requirement of human rights to accept them into the country and that refugees needed to be given educational opportunities (12). It could be stated that the political instability, unlimited rights granted to refugees, the increase in the duration of their stay, and the uncertainty about the future led to this finding of the study. It was seen that the mean score of the sub-dimension of helping Syrian refugees in the Attitude Scale Regarding Syrian Refugees was 2.76±1.20 (Table 1). In the study, the statements related to helping Syrian refugees were as follows: in-kind (food, clothing, etc.), cash (money) aid to the migrant himself/herself, or to any institution/organization to be delivered to the migrants. It was thought that this finding of the study stemmed from the pursuit of misguided policies in the long term and the privilege granted to refugees.

Students aged 23 years and older had a higher level of finding radical solutions for Syrian refugees in the Attitude Scale Regarding Syrian Refugees (Table 2). According to the study of Sumer (16), a significant relationship was observed between the factor of helping Syrian refugees and the age of the students. It could be stated that this finding of the study was related to the positive attitudes of the older participants and that it was related to their experience in life.

In terms of the gender variable, women had higher levels of finding radical solutions for Syrian refugees, finding moderate solutions for Syrian refugees, and helping Syrian refugees in the Attitude Scale Regarding Syrian Refugees. As was seen in the study of Afyonoğlu and Sema (17), a significant relationship was found between the gender of the students and the scores they obtained on the scale. This finding of the study could be explained by the fact that women were more willing than men with regard to helping refugees and this situation could be explained by the characteristics of being a woman. Those who had more than 3 siblings had higher levels of finding radical solutions for Syrian refugees in the Attitude Scale Regarding Syrian Refugees. Those who had four or more siblings had higher levels of the sub-dimensions of finding moderate solutions for Syrian refugees in the Attitude Scale Regarding Syrian Refugees (Table 2). In the study conducted on this subject, the fact that the increase in the number of people in their households negatively affected the amount of income per capita had an effect on the negative attitudes towards refugees due to the worsening of the conditions. Those whose mothers were literate or illiterate had higher levels of finding radical solutions for Syrian refugees and finding moderate solutions for Syrian refugees in the Attitudes Scale Regarding Syrian Refugees. Those whose fathers were university graduates had higher levels of finding moderate solutions for Syrian refugees in the Attitudes Scale Regarding Syrian Refugees (Table 2). This finding of the study could be evaluated as a reflection of the sociocultural characteristics of women and men in our country. Those who had health insurance had a higher level of defending the rights of Syrian refugees. This finding of the study indicated that students perceived how important it was to defend the rights of the refugees. In terms of the place of residence, students living with their friends had higher levels of finding moderate solutions for Syrian refugees, defending the rights of Syrian refugees, and helping Syrian refugees in the Attitude Scale Regarding Syrian Refugees. This finding of the study stemmed from the characteristics of the sample.

The students who did not have job anxiety about the future had higher mean scores in the sub-dimension of finding moderate solutions for Syrian refugees in the Attitude Scale Regarding Syrian Refugees (Table 3). In Gülhan, Şen, and Keskin's (18) study, no difference was found between the presence of the job anxiety of the students and their attitude scores towards refugees. In addition, it was determined that the job anxiety of the students had no effect on their attitudes toward refugees. Although this finding of the study differed from that of the said study, it was thought that in addition to the refugee problem, the COVID-19 pandemic and the economic policies of the countries were also effective in this attitude. Those who felt safe while traveling alone had higher levels of defending the rights of Syrian refugees in the Attitude Scale Regarding Syrian Refugees. Similarly, those who felt safe while traveling alone had higher mean scores in the sub-dimension of defending the rights of Syrian refugees in the Attitude Scale Regarding Syrian Refugees. In the study of Şen and Şimşek (18), it was determined that feeling safe directly affected their attitudes toward refugees. In Gülhan, Şen, and Keskin's (18) study, it was observed that the attitude scores of the students who felt less safe were high, i.e. negative. This findings of the study could be explained by the effects of the peace and harmony

of refugees with the local people. It was seen that those who had refugees in the family had higher mean scores in the sub-dimensions of finding moderate solutions for Syrian refugees and helping Syrian refugees in the Attitude Scale Regarding Syrian Refugees. In the study conducted by Afyonoğlu and Buz (17), no difference was found between the scale scores of the students in terms of the presence of refugees. This finding of the study could be explained by the experiences of the students. In terms of the presence of refugees in the place of residence, the mean scores of the sub-dimensions of defending the rights of Syrian refugees and helping Syrian refugees in the Attitude Scale Regarding Syrian Refugees were higher. In a study, there was no significant difference between the presence of refugees in the region where students lived and the sub-dimensions of the scale (18). This finding of the study indicated that it had a direct effect on the attitudes of the students.

In terms of having refugee friends, the levels of finding moderate solutions for Syrian refugees, defending the rights of Syrian refugees, and helping Syrian refugees were significantly higher (Table 3). In this regard, Kaya (19) found a significant difference in terms of negative perception between those who have a refugee friend and those who do not. Şen and Şimşek determined that having Syrian friends affected attitude scores in the context of attitude and approach towards Syrians. In Şen and Keskin's (18) study, the mean attitude scores of students who did not have Syrian friends were found to be more negative than those who did. This finding of the study suggested that it was due to the characteristics of the refugee friend.

CONCLUSION

It was found that the attitudes of nursing students toward Syrian refugees were partially negative and some individual characteristics and influencing factors were effective on their attitudes toward refugees. In line with the results obtained from the study, it can be recommended that students need to be supported to determine their attitudes towards refugees and the factors affecting them and to develop positive attitudes in this context and that courses related to migration and refugees be added to the undergraduate curriculum.

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RESEARCH ARTICLE
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The Validity and Reliability of the Perceived Maternal Parenting Self-Efficacy Scale: Turkish Version

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ABSTRACT

Objective: Preterm birth can result in a situation where mothers feel less confident in newborn care skills due to being unprepared. They may also experience emotional shock, anxiety, and depression. Thus it is important to determine maternal parenting self-efficacy in order for the mothers to cope with the potential difficulties involved in preterm newborn care. The purpose of this psychometric study is to test the validity and reliability of the Turkish version of the Perceived Mother Parenting Self-Efficacy Scale.
Materials and Methods: The study uses a psychometric approach. Online distribution of a questionnaire between the beginning of March and the end of May 2021 was applied. Data was collected from 105 mothers of preterm infants aged between 1-28 days. The original scale was translated into Turkish and content validity was evaluated. Explanatory factor analysis and confirmatory factor analysis were tested in order to determine validity, and Cronbach's α internal consistency coefficient, item-total correlation, test-retest analysis, and equivalent form analysis were tested to determine reliability.
Results: The mean age of the participants was 32.29±5.33. The factor loads of the items were between 0.361 and 0.911. The Cronbach's α, internal consistency coefficient was 0.891, and the test–retest reliability was 0.851 ($p<0.001$). A significant positive correlation between the Turkish version of the Perceived Maternal Parenting Self-Efficacy Scale and the Maternal Attachment Inventory ($r=0.533$, $p<0.05$) was found.
Conclusion: The Turkish version of the Perceived Maternal Parenting Self-Efficacy Scale is a valid and reliable instrument to evaluate maternal parenting self-efficacy. Further studies are needed to measure the parenting self-efficacy levels of mothers with preterm infants.

Keywords: Maternal self-efficacy, parenting self-efficacy, preterm birth, self-efficacy

INTRODUCTION

Self-efficacy is a key notion of Bandura's social cognition and social learning theory. Bandura defined self-efficacy as trust and basic motivation in a person's ability to take action and make decisions to produce a specific result (1). Self-efficacy consists of factors like action planning, awareness and organization of necessary skills, and level of motivation (2,3).Perceptions of self-efficacy affect emotional reactions as well as behavior While people with high self-efficacy perception can solve their problems and improve their lives through their own effort, people with low self-efficacy perception have to constantly strive to overcome the difficulties they face (4).

One of the important factors affecting women's ability to adapt in the transition to parenthood is parenting self-efficacy (5). Based on Bandura's theory, parenting self-efficacy is defined as "beliefs or judgments parent holds of their capabilities to organize and execute a set of tasks related to parenting a child" (6). Parenting self-efficacy is a mother's confidence to make good decisions for her children. The stronger the parenting self-efficacy, the more effort the mother will put into infant care (7).

Preterm birth, which refers to births before 37 weeks of gestation, is the most common health problem among infants. The worldwide incidence of preterm birth is estimated to be around 11.1% (8). In Turkey, it is as high as about 12% (9). Preterm infants are at greater risk of death and medical

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complications than full-term babies. In addition, most preterm infants need to be cared for in intensive care units for the newborn (10). Moreover, a preterm birth is a situation for which mothers are not prepared, and they may experience emotional shock, fear, anxiety, depression, and, post-traumatic stress (11). Mothers with preterm infants can feel less confident in their childcaring skills because of difficulties in reading the baby's responses as well as in feeding and holding them. Determining maternal parenting self-efficacy level is particularly important in order to help mothers cope with these difficulties in preterm infant care. Mothers with high maternal parenting self-efficacy can easily cope with difficulties in preterm infant care like feeding, holding, and reading their baby's cues (7). However, there is no instrument that measures the maternal parenting self-efficacy levels of Turkish mothers with preterm infants. Therefore, the aim of this study is to test the Turkish validity and reliability of the Perceived Maternal Parenting Self-Efficacy (PMPS-E) Scale.

MATERIALS AND METHODS

Design

This cross-sectional, psychometric study was conducted in two parts. The first part of the study was the translation of the PMPS-E scale from English into Turkish, and the second part was the psychometric testing of the scale.

Part 1: The Turkish Adaptation of the PMPS-E

Before starting the study, permission to translate the PMPS-E scale into Turkish was obtained from the original author by e-mail. Then, the scale was translated from English into Turkish, and back from Turkish into English, by three experts, respectively, thus ensuring that integrity was achieved. For the pilot test, the scale was applied to 10 mothers of preterm infants and the intelligibility of the items on the scale was tested. The mothers each confirmed that they had understood the meanings of the questions in the Turkish version of the PMPS-E scale (TPMPS-E).

Content validity was evaluated by seven experts to examine whether the TPMPS-E scale was applicable as a maternal parenting self-efficacy measure. The experts included one paediatric nurse, five women health and diseases nurses, and one psychiatric nurse who held doctoral degrees. The content validity index was 1.00, which was above the recommended value of 0.99 among six or seven evaluators (12). In this way, it was accepted that the statements on the scale fitted the Turkish language. So, the items of the TPMPS-E scale were not changed.

Part 2: Psychometric Testing of the TPMPS-E Scale

A cross-sectional study was conducted to evaluate the psychometric properties of the TPMPS-E scale. The sample size was determined as 100 participants because the scale had 20 items meaning that, by way of minimum, the number of participants would be five times greater than the number of items (13). The data were collected from 105 mothers who had preterm infants aged between 1-28 days. The questionnaire was uploaded onto Google Forms and advertised on e-mail and social media applications (Facebook, WhatsApp, and Instagram) between March 2021 and May 2021. After two weeks after first application, 95 mothers were contacted for retest.

To examine the equivalent form reliability of the scale, Maternal Attachment Inventory (MAI) was used.

Instruments

The Information Form: The information form included 12 questions which evaluated sociodemographic, obstetric, and infant data. It was prepared by the researchers according to the literature (4,14,15).

The Perceived Maternal Parenting Self-Efficacy Scale: The PMPS-E scale was developed by Barnes and Adamson-Macedo in 2007 (16). It was developed to measure the care and understanding abilities of mothers with preterm babies. The PMPS-E scale includes 20 items, and each item is rated on a four-point Likert scale (1=strongly disagree, 2=disagree, 3=agree, and 4=strongly agree). The total score ranges from 20 to 80, whereby higher scores indicate greater perceived self-efficacy. The PMPS-E scale has four theorized subscales that reflect different aspects of parenting (Factor 1=Care Taking Procedures - 4 items, Factor 2=Evoking Behaviours - 7 items, Factor 3=Reading Behaviours - 6 items, and Factor 4=Situational Beliefs - 3 items. The Cronbach's alpha coefficient of the PMPS-E scale from the original research was 0.91 (16).

The Maternal Attachment Inventory: The MAI was developed by Muller in 1994 and Turkish language validity and reliability were tested by Kavlak and Sirin in 2009 (17). The questionnaire in this study includes 26 items designed to assess maternal emotions and behaviours in the context of parenting. The MAI uses a 4-point Likert response format; total scores range from 26 to 104, and higher scores indicate greater maternal attachment. The Cronbach's alpha coefficient of the scale was 0.82 in the Turkish version (17), and in this study the Cronbach's alpha coefficient was found to be 0.83.

Data Analysis

SSPS 22.0 and AMOS software program was used to analyse the data. Number, percentage, mean, and standard deviation values were calculated in the definition of the data. In the translation process, language and content validity were studied. In the validation process, the suitability of the data for explanatory factor analysis (EFA) was evaluated with Kaiser-Meyer-Olkin (KMO) and Bartlett's sphericity test, and the reliability of the scale was evaluated. A confirmatory factor analysis (CFA) was applied to evaluate whether or not the factor model adapted to the data as a result of EFA. Cronbach's alpha coefficient and test-retest analysis was performed to evaluate the reliability of the scale. The Spearman-Rho correlation test was used to determine the relationship between the scales.

Ethical Approval

Ethics committee approval was obtained from the Non-invasive Clinic Ethical Committee of a university (date: 27.01.2021; no:5). Before filling in the questionnaire, consent was obtained from the participants who had met the criteria for being included in the research sample and who had agreed to participate in

the research. The study was conducted in accordance with the Declaration of Helsinki.

RESULTS

The sociodemographic and obstetric characteristics of the participants and their infants are shown in Table 1. The mean age of the participants was 32.29±5.33. The gravida and parity data of the participants were 2.43±1.61 and 1.71±1.02, respectively. The mean gestational age of the infants at birth was 30.63±3.34 and the mean birth weight was 1555.29±600.96. The infants were on average 13 days old (12.88±9.67). The total score ranges from 20 to 80 as with the original scale.

Validity

Before determining the factor structure of TPMPS-E, the KMO test was used to determine the suitability of the sample size for factor analysis and Bartlett's sphericity test was conducted for statistical significance. KMO coefficient was found to be 0.836 and Bartlett's sphericity test was determined as $\chi 2 = 1080.462$ and they were statistically significant ($p<0.001$). According to the results, the sample size was appropriate for factor analysis (Table 2).

Table 1: Characteristics of participants and infants (N=105)

Characteristics	Mean±SD	Min	Max
Age	32.29±5.33	19	50
Gravida	2.43±1.61	1	9
Parity	1.71±1.02	1	9
Gestational age at birth of infants	30.63±3.34	24	37
Birth weight of infants (gram)	1555.29±600.96	580	3500
Infant age (day)	12.88±9.67	1	28
		n	**%**
Education	*Primary School*	9	8.6
	High School	29	27.6
	Undergraduate or above	67	63.8
Working Status	*Working*	48	45.7
	Not Working	57	54.3
Delivery Type	*Vaginal*	12	11.4
	Caesarean Section	93	88.6
Infant gender	*Boy*	47	44.8
	Girl	58	55.2

Table 2: KMO and BTS analysis results and factor loading for EFA with varimax rotation of the TPMPS-E scale (N=105)

Test	Value	p
KMO	0.836	
BTS	1080.462	0.000

Scale Items	Factor Loading	Total Variance (%58.743)
Factor 1: Care Procedures		35.860
18. I am good at changing my baby.	0.375	
19. I am good at bathing my baby.	0.475	
Factor 2: Evoking Behaviors		10.505
8. I can make my baby calm when he / she has been crying.	0.745	
9. I am good at soothing my baby when he / she becomes upset.	0.911	
10. I am good at soothing my baby when he / she becomes fussy.	0.778	
11. I am good at soothing my baby when he / she continually cries.	0.787	
12. I am good at soothing my baby when he / she becomes more restless.	0.868	
14. I am good at getting my baby's attention.	0.718	
Factor 3: Reading Behaviours		6.680
1. I believe that I can tell when my baby is tired and needs to sleep.	0.437	
5. I can make my baby happy.	0.743	
6. I believe that my baby responds well to me.	0.561	
7. I believe that my baby and I have a good interaction with each other.	0.389	
13. I am good at understanding what my baby wants.	0.623	
16. I am good at keeping my baby occupied.	0.497	
Factor 4: Situational Beliefs		5.698
2. I believe that I have control over my baby's care.	0.595	
3. I can tell when my baby is sick.	0.361	
4. I can read my baby's cues.	0.773	
15. I am good at knowing what activities my baby does not enjoy.	0.739	
17. I am good at feeding my baby.	0.719	
20. I can show affection to my baby.	0.854	

KMO: Kaiser-Meyer-Olkin; BTS: Barlett's test of sphericity.

According to the EFA results, there were four factors with eigenvalues greater than 1 (just as in the original scale), and some of the items were different according to the original scales, but the original factor names for the PMPS-E scale were not changed. This is because the Turkish meaning of the items corresponded to the factor names. The factor regarding care procedures was included in items 18 and 19 (16, 17, 18, 19 in the original scale); evoking behaviours factor was included in items 8, 9, 10, 11, 12, 14 (5, 8, 9, 10, 11, 12, 14 in the original scale); reading behaviours factor was included in items 1, 5, 6, 7, 13, 16 (1, 2, 3, 4, 13, 15 in the original scale) and situational beliefs factor was included in items 2, 3, 4, 15, 17, 20 (6, 7, 20 in the original scale). The total variance of the scale was 58.743% and the subscales as follows: care-taking procedures was 35.860%; evoking behaviours was 10.505%; reading behaviours was 6.680% and situational beliefs was 5.698%. The factor loads of the items on the scale were between 0.361 and 0.911. None of the items showed loading under the cut-off (0.30) (Table 2).

Table 3: Item Total Statistics results for TPMPS-E Scale (N=105)

Scale Items	Corrected item total *r*	Cronbach Alpha (α=0.891)
18	0.526	
19	0.371	0.810
8	0.658	
9	0.747	
10	0.715	
11	0.675	0.917
12	0.736	
14	0.653	
1	0.481	
5	0.590	
6	0.565	
7	0.509	0.747
13	0.732	
16	0.577	
2	0.308	0.690
3	0.363	
4	0.497	
15	0.581	0.690
17	0.364	
20	0.571	

We performed CFA to verify whether the structure of the TPMPS-E scale in this study was equivalent to the original PMPS-E model. However, the model did not meet the criteria for good fit ($\chi 2$= 131.98 [p<0.05], comparative fit index [CFI]=0.72, goodness of fit index [GFI]=0.71, and root mean square error of approximation [RMSEA]=0.07). It was found that the factor structure for the current data obtained from Turkish mothers was different from the original scale.

Reliability

Cronbach's α coefficient was applied to calculate the internal consistency of the scale, and it was found to be 0.891. Cronbach's α values for the subscales were as follows: care procedures (α=0.810); evoking behaviours (α=0.917); reading behaviours (α=0.747); situational beliefs (α=0.690). The item total correlation of the scale is shown in Table 3.

Test-retest analysis was performed to determine the stability of the scale over time. For analysis, the scale was applied to the sample group (n=95) a second time, 2 weeks after the first application. Correlation values of the relationship between test and retest results were determined as r=0.851 for total scale score and r=0.800, r=0.711, r=0. 860 and r=0.848 for subdimensions, respectively, and it was found as statistically significant (p<0.001) (Table 4).

Within the scope of the equivalent form reliability of the scale, the correlation between TPMPS-E total score and subscale scores and MAI scores was examined. Correlation values of the relationships between TPMPS-E total scores and MAI total scores were determined as 0.533; the correlation values of the relationships between the subdimensions of TPMP S-E and MAI total score were determined between 0.190 and 0.590 and statistically significant (p<0.05) (Table 4).

DISCUSSION

The original PMPS-E scale was developed to assess maternal parenting self-efficacy for mothers of preterm infants during the neonatal period (16). This study was conducted to determine the validity and reliability of the Turkish version of the PMPS-E. TPMPS-E was tested to determine if the scale was adequate to evaluate the maternal parenting self-efficacy of Turkish mothers with preterm infants.

EFA of the items in the scale was made to evaluate the validity of the scale. It was found that most of the items' factor loads were

Table 4: Internal Consistency and Equivalent Form Reliability of the TPMPS-E Scale (N=105)

	Retest application					MAI
First application	**CP**	**EB**	**RB**	**SB**	**TOTAL**	
Caretaking Procedures (CP)	0.800**					0.190*
Evoking Behaviors (EB)		0.711**				0.361*
Reading Behaviors (RB)			0.860**			0.590**
Situational Beliefs (SB)				0.848**		0.332*
TOTAL					0.851**	0.533**

*p<0.05, **p<0.001

greater than 0.50 (between 0.36 and 0.91). Only six of the items' factor loads were less than 0.50, similar to the original scale (16).In the Japanese version (4),factor loads of the items were between 0.18 and 0.84. In the Italian version (15), all the items' factor loads were greater than 0.50. When the total variance was examined, it was found that the total variance was 58.74% in this study. In scale adaptation studies, it is sufficient to explain 30% of the total variance and to be higher than 0.30 for factor load values (18). Therefore, it can be said that this scale is a useful instrument for Turkish mothers with preterm infants.

After the varimax rotation for the EFA, four factors (sub-dimensions) were indicated as in the original scale (16). However, some of the items in the sub-dimensions of the scale were different from the original scale. Factor 1 (care procedures) included 2 items (18, 19), but this factor consists of 4 items (16, 17, 18, 19) in the original scale. Factor 2 (evoking behaviours) included 6 items (8, 9, 10, 11, 12, 14), but there are 7 items (5, 8, 9, 10, 11, 12, 14) in the original scale. Factor 3 (reading behaviours) included 6 items (1, 5, 6, 7, 13, 16). There are also 6 items (1, 2, 3, 4, 12, 15) in the original scale. Factor 4 (situational beliefs) included 6 items (2, 3, 4, 15, 17, 20), but there are only 3 items (6, 7, 20) in the original scale (16).In Turkish, the meaning of the 16th item (I am good at keeping my baby occupied) was found suitable for reading the behaviour of the baby. The meaning of 17th item (I am good at feeding my baby) in Turkish was found suitable for situational beliefs. It is noteworthy that the items in factor 4 were different from the original scale. In the Turkish version of the scale the meaning of items 2, 3, 4, 15 and 17 were about the mothers' situational beliefs. This difference between the factor items may have to do with cultural differences. The names of the factors were not changed because most of the items were the same according to the original scale and in Turkish the items of the factors were suitable for the factor names.

CFA was applied to evaluate whether or not the factor model adapted to the data as a result of EFA. However, the model did not satisfy the criteria for good fit ($\chi 2=131.98$ [$p<0.05$], comparative fit index [CFI]= 0.72, goodness of fit index [GFI]=0.71, and root mean square error of approximation [RMSEA]=0.07). According to this result, it can be said that the factor structure for the current data from Turkish mothers was different from the original scale. In the Japanese version, the factor structure was also found to be different from the original scale (4). While CFA was not evaluated in the Portuguese version, the four-factor model was confirmed in the Italian version (15).

Reliability is the degree to which a scale can deliver sensitive, consistent, and stable results. One of the methods to find the reliability of a scale is to evaluate the internal consistency. It was decided that the Cronbach's α coefficient should be calculated to evaluate the internal consistency of a Likert-type scale (19). The Turkish version of PMPS-E was found to be reliable since Cronbach's α value was higher than 0.80 (Cronbach's α=0.89). Cronbach's α value was 0.91 in the original scale (16). In the Japanese version the Cronbach's α value was 0.90 (4), and in the Italian version the Cronbach's α value was 0.93 (15). The Cronbach's α value was 0.86 in the Portuguese version (14).

The item-total score correlation test was also used to evaluate internal consistency. Item-total score correlation coefficient shows the relationship between each item and total value, and according to the literature, the total score correlation of an item should be at least 0.30 (20). In this study, the total item correlation of TPMPS-E was determined to be between 0.363 and 0.747. In the Italian study it was between 0.488 and 0.730. According to the item-total correlation coefficients, the Turkish version of the scale's internal consistency is high.

Another consistency criterion is test-retest reliability. The coefficient of the correlation of the total score and the factors was high over a 2-week period, thus supporting the test–retest reliability of the questionnaire. For the equivalent form reliability, the correlation between the TPMPS-E total score and subscale scores and MAI scores was examined. With regard to the relationship between parenting self-efficacy and attachment, a positive and moderate correlation between TPMPS-E and MAI scores was found ($r=0.533$, $p<0.001$). In the original scale, the MAI was also used to evaluate equivalent form reliability and a positive but weak correlation was found (16). When all the tests examining the reliability of the TPMPS-E are evaluated in this study, it can be said that the Turkish version of PMPS-E is a reliable scale for the Turkish population.

CONCLUSION

The study was conducted to test the Turkish validity and reliability of the PMPS-E scale among mothers with preterm infants. The EFA results showed an adequate validity, but the CFA results showed that theoretical and cultural structures may differ from the original scale. The Cronbach's α internal consistency coefficient of the scale showed high reliability in item-total correlation, test-retest analysis, and equivalent form analysis. These results showed that the Turkish version of the PMPS-E scale is a valid and reliable instrument to evaluate maternal parenting self-efficacy.

Ethics Committee Approval: This study was approved by the ethics committee of Non-invasive Clinic Ethical Committee of a university (date: 27.01.2021; no:5).

Informed Consent: Written consent was obtained from the participants.

Peer Review: Externally peer-reviewed.

Author Contributions: Conception/Design of Study- M.T., Ü.Y.O.; Data Acquisition- M.T., Ü.Y.O.; Data Analysis/Interpretation- M.T., Ü.Y.O.; Drafting Manuscript- M.T., Ü.Y.O.; Critical Revision of Manuscript- M.T., Ü.Y.O.; Final Approval and Accountability- M.T., Ü.Y.O.

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Investigation of Nursing Student's Perceptions and Attitudes Toward Their Profession During the COVID-19

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ABSTRACT

Objective: Due to COVID-19, it is thought that nursing students' perceptions and attitudes toward the nursing profession have changed nowadays.
Materials and Methods: To examine the perceptions and attitudes of nursing students to their profession during COVID-19. This study was performed based on a descriptive and cross-sectional design. The universe of the study was 226 nursing students who participated in the academic year of 2020-2021, and the study was applied to 191 nursing students who agreed to participate in the research at Bazmialem Vakif University in Istanbul. The Sociodemographic Characteristics Data Form and Attitude Scale for Nursing Profession were used to collect data.
Results: 58.1% of the students stated that they would like to work in the field as a nurse if they had graduated during the pandemic, and 41.9% of them did not want to work in this process. The rate of those who think that the COVID-19 process has negatively changed the idea of practicing their profession in the future is 11.5%, while the rate of those who think that it has not changed negatively was 88.5%. The students thought that nurses did not get the regard they deserved in this process was significantly higher (p=0.042).
Conclusion: Findings highlighted the need to determine the students's attitudes about their profession after the COVID-19 pandemic.

Keywords: Nursing students, COVID-19, profession, attitude

INTRODUCTION

The coronavirus disease (COVID-19), which started in Wuhan China in December 2019, was included in the category of epidemic diseases by the World Health Organization (WHO) on February 11, 2020 (1,2). In addition to its physiological effects on people, COVID-19 affected mental health during the emergence of the first case and the increase in the number of cases (3). Epidemics were seen throughout life not only affecting the living things carrying the infection, but also society in many ways. Therefore, epidemics constitute an important problem for the whole world (1).

A nurse is a person who has completed the basic nursing education program, provides a holistic service to individuals and society, contributes to the country and society, meets the health needs of the sick individual, and raises the health level of society. Nurses, whose beginnings are based on the existence of human beings, are one of the most affected professions during the COVID-19 pandemic process (4). Nurses who work

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at the forefront of the management of the epidemic and took an active role in the care and treatment of patients. They were affected physically and psychologically by this process due to long working hours, insomnia problems, risk of infection, being away from their families, and loss of caregivers or other health workers because of the epidemic (5,6).

Today, the increasing need for nurses has increased the importance of nursing education. Accordingly, nurses who specialize in their fields, have problem-solving skills, and can think critically are needed to provide qualified care to society. The development of professional identity, which started in student life, is also provided by the education system (7). With the pandemic, serious changes have occurred in the education life of nursing students. The closure of schools, the uncertain date of reopening, and the rapid increase in the number of cases have brought uncertainty and a stressful process for students. During COVID-19, face-to-face education quickly turned to online education, and nursing students who could not go into clinical practice during this period due to pandemic bans experienced distress and low motivation (8). In a recent study conducted by Kürtüncü and Kurt (2020) with 824 nursing students, it was found that most of the students studying during the distance education period had complaints about being away from the clinic. Some of the comments from the students were that staying away from clinical practice could prevent learning (9). In another study conducted by Taş and Dalcalı (2020) with 158 nursing students, it was observed that the students were hesitant about learning their professional practices in this process. In conclusion, it was seen that the students could not perform completely learning because they have provided a better understanding of the importance of the nursing profession worldwide process has provided a better understanding of the importance of the nursing profession all over the world. Despite this, it has created differ nursing students' attitudes toward the profession. With COVID-19, it has become important to question the attitudes of nursing students towards the nursing profession and to evaluate their perceptions of the nursing profession, who have witnessed the difficulties experienced by the nursing profession. So, a recent study purposed to determine nursing students' attitudes and perceptions towards the nursing profession during the COVID-19 pandemic.

MATERIALS AND METHODS

Study design and sample

This cross-sectional study was performed between January and March 2021. The population of the study consisted of 226 students at the Faculty of Health Sciences. The sample of the study was 191 nursing students were who accepted to participate in the study and were selected by random sampling method. Nursing students over 18 years old with internet acc students' sociodemographic characteristics and study.

Research Questions

1. What are the sociodemographic characteristics of the students and their perceptions of COVID-19?
2. What is the level of student's attitudes towards the nursing profession?

Data collection tools

Information form: This form including items on students' sociodemographic characteristics, such as age, gender, education grade, family status, income level, and seven questions about their perception of COVID-19, was used in the present study. These seven questions were made by researchers, looking at the current literature (11,12). These questions were about learning their thoughts about nursing status during the pandemic.

Attitude Scale for Nursing Profession: The Attitude Scale for Nursing Profession (ASNP), created by Çoban & Kaşıkçı was used in this study to assess the thoughts of students about the nursing profession during the COVID-19. The validity and reliability of the scale (for Turkish) were made by Çoban & Kaşıkçı. The ASNP consists of 40 items and is created to measure the sub-dimensions (Characteristics of the Nursing Profession, Preferring Nursing Profession, and Attitude towards the General Situation of the Nursing Profession). Participants answer items on a 5-point Likert-type scale, ranging from 1 ('I strongly disagree') to 5 ('I totally agree'). An increase in the score obtained from the scale showed that positive attitudes to nursing increased. The reliability of the scale was estimated by examining internal consistency measures. A Cronbach's alpha of the scale was found to be 0.91. And it showed that study of its validity and reliability (13). A Cronbach's α coefficient of 0.88 was found in the present study.

Data collection

A questionnaire (online) was performed to collect data. The questionnaire existed of the information form created for our study and the ASNP. A link for the questionnaire was sent to the students via researchers (WhatsApp Inc., Menlo Park, CA), and incomplete forms were removed from the data.

Statistical analysis

Data were analyzed with Statistical Package for the Social Sciences 22.0 program. Values for the students and their perception of COVID-19 were analyzed as numbers and percentages. Shapiro Wilk was used for the normality test. Non-parametric tests (the Mann-Whitney U test) were used to compare variables. A p-value of <0.05 was accepted for statistical significance. The results were looked at the significance level of $p<0.05$ at a confidence interval of 95%.

Ethical Dimension

This study was accepted by one university ethics committee (E-54022451-050.01.04.6312 / 25.02.2021). For the ASNP we used in the present study, permission was obtained bye-mail from Çoban. Volunteer students who agreed to participate in the study were included in the study. Informed consent was taken from all participants via the questionnaire. On the consent page, the students were given about the purpose of the present study, their information in the study was voluntary and all personal information would be kept confidential. Throughout the study, the Declaration of Human Rights was adhered to.

RESULTS

191 students in the study were enrolled in the study. 93.2% were female, 6.8% were male, 29.8% were 2nd-grade students, and there was a relatively equal distribution of students. 91.0% of the students had a nuclear family structure, and 95.8% lived with their families. 93.7% did not work in any job, and 76.4% met their income expenses. Results indicated that 84.3% of the students consumed future anxiety, and 39.3% followed the information about COVID-19 from social media sources. It was determined that 98.4% of students found COVID-19 dangerous (Table 1).

Table 1: Sociodemographic characteristics of students (N=191)

	N	%
Age		
18-20	111	58.1
21-22	73	38.2
23-24	7	3.6
Grade		
1th	49	25.7
2nd	57	29.8
3rd	49	25.7
4th	36	18.8
Gender		
Woman	178	93.2
Man	13	6.8
Family type		
Nuclear	174	91.0
Extended	17	8.9
Income-expenditure status		
Income-expense meets	146	76.4
More than income-expenditure	20	10.4
Less than income-expenditure	25	13.0
Working status		
Yes	12	6.3
No	179	93.7
Future anxiety		
Yes	161	84.3
No	30	15.7
Information resource on COVID 19		
Social media	75	39.3
Health institution	11	5.8
Audio/visual media	105	55.0

58.1% of the students who participated in the present research stated that they would like to work in the field if they were a nurse during COVID-19. The rate of students who thought that the COVID-19 pandemic process has changed their ideas positively applying to the nursing profession was 53.4%. The rate of those who thought that the pandemic process contributed positively to the image of nursing was 80.6%, and the rate of those who thought that it did not contribute positively is 19.4%. The rate of those who thought that nursing problems were not brought to the agenda during the pandemic process was 60.7%. The rate of students who thought that the COVID-19 process has negatively changed the idea of practicing the profession in the future was 11.5%, while the rate of students who thought that their opinion has not changed negatively was 88.5%. 85.3% of the students thought that nurses did not get the worth they deserve during the Covid-19 process and 99.4% thought that nurses worked devotedly during the COVID-19 process (Table 2).

The average score on the ASNP was 157.31±14.96, indicating that the students had a moderately positive attitude to the nursing profession. The average scores for subgroups were 39.28±5.46, 36.81±5.02, and 39,28±5,46 (Table 3).

There was no significant difference between the gender, class, living people, family type, number of siblings, and scale score averages of the students who participated in the research. The mean score of CNP (p=0.028, Z:-2.197) and AGSNP (p=0.028, Z:-2.197) were significantly higher in working students compared to non-working students. The score of AGSNP of students who thought that nurses did not receive the value they deserved during COVID-19 was significantly higher than the answered yes (p=0.042, Z:-2.030). Students who thought that COVID-19 did not contribute negatively to the image of nurses had a significantly higher AGSNP score than other students (p=0.031, Z: -2,157). While the mean score of AGSNP of Students who thought that they have changed their ideas (in a negative way) about practicing the COVID-19 profession in the future was significantly higher than others (p=0.030, Z: -2.169), the mean score of PNP is significantly lower (p=0.018, Z:-2.358) (Table 4).

Table 2: Students' perceptions about the nursing profession during the COVID-19 (N=191)

		n	%
I would like to be a nurse during the COVID-19 pandemic.	Yes	111	58.1
	No	80	41.9
The COVID-19 has positively changed my ideas about practicing the nursing profession in the future.	Yes	102	53.4
	No	89	46.5
I think that COVID-19has a positive contribution to the image of nurses.	Yes	154	80.6
	No	37	19.4
I think that the problems existing in the nursing profession came to the fore during the COVID-19.	Yes	75	39.3
	No	116	60.7
The COVID-19 has negatively changed my ideas about practicing the nursing profession in the future.	Yes	22	11.5
	No	169	88.5
I think nurses get the value they deserve during COVID-19 period.	Yes	28	14.6
	No	163	85.3
I think nurses are working selflessly during the COVID-19.	Yes	190	99.4
	No	1	0.5

Table 3: Attitude Scale for Nursing Profession (ASNP) Scores (N=191)

Sub dimensions	Mean±SD	Min-Max	Score Range
Characteristics of the Nursing Profession (CNP)	39.28±5.46	14.00-45.00	54 and above
Preferring the Nursing Profession (PNP)	36.81±5.02	21.00-59.00	39 and above
Attitude towards the General Situation of the Nursing Profession (AGSNP)	39.28±5.46	14.00-45.00	27 and above
ASNP Total	157.31±14.96	87.00-184.00	40-200

Tablo 4: Comparison of ASNP and sub-dimension mean scores according to students' perceptions (N=191)

Items	ASNP			CNP			PNP			AGSNP		
	Mean±SD	MWU	p	Mean±SD	MWU*	p	Mean±SD	MWU*	p	Mean±SD	MWU*	p
Family Type												
Nuclear	157.07±15.40			39.07±5.60			36.82±5.21			39.07±5.609		
Extended	159.71±9.31	1.456	0.918	41.41±3.00	1.405	0.733	36.76±2.35	1.448	0.888	41.41±3.001	1.108	0.087
Working status												
Yes	161.50±10.43	9285	0.432	42.08±2.84	668.5	**0.028**	35.83±4.13	937.5	0.460	42.08±2.843	668.5	**0.028**
No	157.03±15.19			39.09±5.54			36.88±5.08			39.09±5.549		
I think nurses get the value they deserve during COVID-19												
Yes	151.61±19.619	1.812	0.082	37.39±6.431	1.781	0.063	35.79±4.725	2.084	0.462	37.39±6.431	1.736	**0.042**
No	158.29±13.848			39.61±5.233			36.99±5.067			39.61±5.233		
I think the pandemic has a negative impact on the image of nurses.												
Yes	158.48±9.862			82.52±5.925			37.44±4.925			38.52±3.766		
No	157.12±15.656	2.125	0.738	81.00±9.369	2.161	0.843	36.71±5.048	2.017	0.458	39.28±5.463	1.642	**0.031**
The pandemic has negatively changed my ideas about practicing nursing in the future.												
Yes	156.95±12.963	1.718	0.564	41.23±4.197	1.699	0.512	35.18±3.361	1.331	**0.018**	41.23±4.197	1.286	**0.030**
No	157.36±15.235			39.03±5.567			37.02±5.172			39.03±5.567		

*Mann Whitney U

DISCUSSION

Sociodemographic characteristics of students

191 students participated in the study, of which 93.2% were female, and 6.8% were male. 84.3% of the students who were asked about the existence of future anxiety stated that they had future anxiety, and 15.7% stated that they did not have any future anxiety. In addition, 98.4% of the students stated that they found COVID-19 dangerous. During epidemics, nursing students often felt fear and psychological distress (12,14). For this reason, it is thought that the future anxiety and fear of COVID-19 in students increased in our study as the nursing profession is not easy under normal conditions and the pandemic made it more difficult (8). It was observed that most of the students chose audio/visual media as the source of accessing information about the pandemic. This shows that the students ignore the unverified information that is too social, which shows that their critical thinking and social media literacy are in good condition (15).

Students' Perceptions of the COVID-19

In our study, the students who said that the pandemic process contributed positively to the image of nursing (80.6%) and that Covid-19 pandemic process changed their ideas about applying to nursing positively (53.4%). With these results, it is seen that students realize the real value and importance of nursing through crisis experience, as well as the reality of the high risks of the nursing profession (11,15). In addition, the rate of those who think that nursing problems are not on the agenda during the pandemic (60.7%), nurses do not receive the value they deserve during the Covid-19 process (85.3%), and that nurses work devotedly (99.4%) were high.

Attitude Scale for Nursing Profession (ASNP) Scores

In the study, the ASNP score average was found to be high. The high ASNP score average indicates positive attitudes to the profession (13). Like the results we found, in the study of Seval and Sönmez (2018) conducted in our country, the mean score of the Attitude Scale for Nursing Profession and the mean scores of all sub-dimensions were found to be high (16). Similar results were obtained in the study conducted by Miligi and Selim (2014) (17). With these results, it is said that the COVID-19 process did not negatively change the attitudes of nursing students toward the nursing profession. When we look at the studies on working nurses, Tarhan et al. (2016) reported that the ASNP score average and sub-dimension mean score was also high (18). In the study of Çoban and Yurdagül (2014), another study in which the same scale was used, on working nurses, the ASNP score average and sub-dimension mean score was reported to be low (19). It is thought that the reason why this research finding is different from the research findings mentioned above may be because only nurses who care for

cancer patients in medical and radiation oncology clinics were included in the study.

Comparison of ASNP and sub-dimension mean scores according to students' perceptions

According to the working status, the average score of the working students and the average score of AGSNP are significantly higher than the students who are not working. It is thought that working status reduces students' fears and increases their attitudes toward positive the nursing profession (15). Those who did not tell that nurses received the value they deserved during COVID-19 were significantly higher than those who thought they did. In this case, nursing students think that the nursing profession should be valued more. We think that this situation affected the students' ideas of working as nurses after graduation because nurses do not see the value they deserve in the health system during COVID-19 (20). Students who think that the COVID-19 process does not contribute negatively to the nursing image have a significantly higher AGSNP score average than students who think that it does. It is thought that this increasing image also increases the commitment of nursing students toward the profession. According to a similar study by Taş and Dalcalı (2021), students (24.7%) who think that their motivation is positively affected during COVID-19, think that the importance of their profession is understood during COVID-19 (10). Students who think that their ideas about practicing the nursing profession during Covid-19 have changed (negatively), compared to students who think that they have not changed negatively, while the mean score of AGSNP is significantly higher, while the mean score of PNP was significantly lower. In the study conducted by Birimoğlu Okuyan et al. (2020), a significant difference was got between the mean scores of nursing students' fear of contagion due to the epidemic, fear of death, future anxiety, and health anxiety (21). According to another study, in addition to students' academic anxiety, the fear of being infected also caused a significant increase in anxiety levels during the pandemic (22). This situation makes us think that students want to work in general, but they do not prefer to work during the pandemic process.

CONCLUSION

Although the nursing students told that nurses could not get their worth even though they worked devotedly, it was revealed that their attitudes to their profession were positive. However, the fact that some nursing students were told that nurses could not get the worth they deserved during COVID-19 negatively affected their views on doing the profession in the future and their look in the future. However, students' understanding of the value of their profession and realizing the good aspects of the profession have affected their attitudes toward the profession positively. In addition, it was revealed that they thought that the COVID-19 process had a positive effect on the image of the profession. In this process, it was understood that the students working in any job were positive towards the profession. Based on these results, it is recommended that nursing should improve their working conditions, especially in crises for nursing students' attitudes towards the profession to develop positively. Since the study, which is included in the limitations of our research, is only for nursing students, it is recommended to conduct the study with nurses working in the clinical field and get their opinions to inspire future researchers.

Strengths and limitations

The strength of this study is to use of online links to collect data. It was fast to reach students. Limitation, participation was voluntary, and the election could make a bias.

Ethics Committee Approval: This study was approved by the ethics committee of

Informed Consent: Written consent was obtained from the participants.

Peer Review: Externally peer-reviewed.

Author Contributions: Conception/Design of Study- M.M., H.T., Ş.D., S.Ş., M.O., S.A., S.B.; Data Acquisition- M.M., H.T., Ş.D., S.Ş., M.O., S.A.; Data Analysis/Interpretation- M.M., S.B.; Drafting Manuscript- M.M., H.T., Ş.D., S.Ş., M.O., S.A., S.B.; Critical Revision of Manuscript- H.T., S.B.; Final Approval and Accountability- M.M., H.T., Ş.D., S.Ş., M.O., S.A., S.B.

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Investigating the Relationship Between Critical Thinking Disposition and Job Satisfaction Among Critical Care Nurses

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ABSTRACT

Objective: This research aims to examine the relationship between critical thinking disposition and job satisfaction among critical care nurses.
Materials and Methods: The research data were obtained from 104 nurses working in critical care units (i.e., adult, pediatric, newborn, cardiovascular surgery, coronary) as well as other healthcare personnel working with the nurse staff and serving as nurses, all of whom agreed to participate the research while working in a training and research hospital. The research data were gathered using the author-developed sociodemographic survey form, Marmara Critical Thinking Dispositions Scale and Nurse Job Satisfaction Scale and analyzed using the program Statistical Package for Social Sciences (SPSS 21.0).
Results: Of the participants, 74% are female (n=77), 69.2% are between the ages of 21-29 (n=72), and 34.6% are married (n=36); at the same time, 94.2% of the participants are nursing graduates (n=98). The intensive care nurses participating in the research (n=104) were found to have a mean score on the Marmara Critical Thinking Disposition Scale of 4.22 out of 5 (SD=0.48). The average of their job satisfaction scores was 3.76 out of 5 (SD=0.45). The participants were found to have high critical thinking levels and moderate job satisfaction levels.
Conclusion: The study has determined the intensive care nurses with sufficient critical thinking disposition levels to also have increased job satisfaction. Many of the sub-scales that determine individuals' critical thinking disposition and job satisfaction have been determined to affect each other positively. The results from this research have been found to be compatible with a study conducted outside of Türkiye on this subject.

Keywords: Critical thinking disposition, Intensive care, Job satisfaction, Nursing

INTRODUCTION

Critical thinking skills are used during the education and practice of nursing for spreading professionalism and developing basic attitudes (1). Having nurses develop critical thinking skills is an important condition for the provision of quality care (2). Critical thinking allows nurses to develop their practice skills based on their own decisions and is stated to improve the efficiency of the service nurses provide as well as their ability to evaluate current conditions. Critical thinking allows nurses to establish causal relationships, accelerates thinking processes through the method of inductive deduction, and improves their intellectual abilities regarding such things as evaluating facts. In addition, nurses disposed toward critical thinking have been stated gain the ability to meet patients' needs under all conditions, to think about options that will lead to better results, and to apply these options by thinking, questioning and understanding them before fulfilling a given task (3).

Nurses who work in the nursing profession, especially those in intensive care, often encounter unexpected complex problems and are the first to identify changes in a patient's condition. Intensive care nurses are expected to make quick decisions in an emergency (4). Therefore, critical thinking is an extremely important ability that allows intensive care nurses to perform their roles by making logical and appropriate decisions, to gain professional knowledge and experience, to distribute responsibilities appropriately, to ensure the reliability of the hospital environment, and to provide effective nursing care (5).

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Nurses are a decisive element in the quality of care and patient care satisfaction due to their special position of being in communication with patients 24 hours a day. On the other hand, a nurse's job satisfaction is considered one of the factors that increase nurse-related patient satisfaction (6). A study conducted on nurses working in an ear, nose, and throat (ENT) polyclinic in 2011 examined the relationship between nurses' decision-making strategies and professional satisfaction levels and determined nurses who'd developed autonomous decision-making strategies to have significantly higher job satisfaction levels (7). Various factors that affect nurses' job satisfaction (e.g., stress management) have been discussed in the literature (8). In addition, work stress was found to be low in nurses with high levels of critical thinking (9). Another study stated a significant positive relationship to exist for nurses' educational preparation, autonomy, and critical thinking with their job satisfaction (10). In this context, studies in Türkiye have separately discussed intensive care nurses' critical thinking dispositions and job satisfaction, with none of these studies being found to have revealed a relationship between critical thinking disposition and job satisfaction. The aim of this study is to determine the relationship between intensive care nurses' critical thinking dispositions and job satisfaction levels, and as such, the research asks the following questions:

- Does a relationship exist between the critical thinking dispositions of nurses working in intensive care and their job satisfaction levels?
- What variables affect the critical thinking dispositions and job satisfaction levels of nurses working in intensive care?

MATERIALS AND METHODS

The study is a descriptive type of research, and its universe consists of 128 employees working as intensive care nurses at a university hospital. The sample of the study consists of 104 participants who met the following inclusion criteria:

- The participants are having worked in intensive care for at least 6 months
- The participants volunteering to participate in the study

Data Collection Process and Tools

The data were collected between June and July in 2020. The research data were collected in a hospital setting. The questionnaires were delivered to the employees by hand through the responsible nurses. The data collection process had been planned to occur over seven workdays, but due to employees changing shifts and the limitations of the COVID-19 pandemic, it was completed over 15 workdays. The data were collected using a socio-demographic questionnaire form, the Marmara Critical Thinking Tendency Scale (11), and the Nurse Job Satisfaction Scale, which were created by the researcher for the purposes of the study.

Socio-Demographic Questionnaire Form

This form contains 23 questions and was created by the researcher in consideration of the literature (5, 8) in order to determine the participants' sociodemographic characteristics and to compare their critical thinking dispositions and job satisfaction within the framework of these characteristics.

Marmara Critical Thinking Dispositions Scale (MCTDS)

This scale was developed by Özgenel and consists of six subscales (reasoning, reaching judgment, seeking evidence, seeking truth, open-mindedness, systematicity) and 28 items. The scale items are scored from 1 = lowest to 5 = highest, with higher scores indicating higher critical thinking tendencies. Whether a participant has the characteristics determined by one of the subscales is determined by their scores for the items from each subscale. In addition, the scale is stated to provide the critical thinking disposition score, with the average of the scores obtained from the subscales and the total scale being calculated separately while scoring. The original validity and reliability study of the scale revealed a Cronbach's alpha = 0.91, while the Cronbach's alpha as calculated in this study is 0.950. The distribution of the scale items according to subscale and question number is as follows: reasoning involves questions 1-6, reaching judgment involves questions 7-12, searching for evidence involves questions 13-16, searching for the truth involves questions 17-20, open-mindedness involves questions 21-24, and systematicity involves questions 25-28 (11).

Nurse Job Satisfaction Scale (NJSS)

The scale was determined to be valid and reliable for Turkish by Yılmaz and Yıldırım (12). and has 27 items and 4 subdimensions (positive feelings about the job, appropriate support from superiors, perceived importance in the workplace, and pleasant work environment). The original scale was created by Muya et al. (13) in Japan, with a Cronbach's alpha = 0.90 being found in the Turkish validity and reliability study (11). Cronbach's alpha was calculated as 0.882 for the current study. The scale items are scored between 1 and 5 as a 5-point Likert-type scale. The total score for the scale is evaluated as 5 showing high job satisfaction and 1 showing low job satisfaction. The distribution of the items according to the subscales and the order of the scale's 27 questions is as follows: positive feelings about the job involves questions 1-8, appropriate support from superiors involves questions 9-14, perceived importance in the workplace involves questions 15-22, and pleasant work environment involves questions 23-27.

Evaluating the Data

The study data were transferred to digital media and analyzed in the package program SPSS 21 with the level of significance being determined as $p < 0.05$. Percentages, means, standard deviations, and frequencies have been calculated over the descriptive statistics data. The skewness values of the variables range between -0.79 and 0.09, and between -0.87 and 0.24 for the kurtosis values. Because the kurtosis and skewness values range between ±1, the variables are seen to exhibit a normal distribution. For this reason, parametric statistics have been used to analyze the data. In this context, the t-test, one-way analysis of variance (ANOVA), Pearson correlation analysis, and Scheffe test (a post-hoc test) were performed over the independent samples.

Limitations of the Study

The research was carried out between June and July in 2020. The changes that occurred in the hospital and work conditions due to the COVID-19 pandemic that was experienced during these dates and how this affected the employees are considered to be the limitations of the research. The presence of employees who did not want to participate in the study and who were absent from work on the dates of the study are also considered to be other limitation factors.

Ethical Considerations

This research was evaluated ethically in the planning stage by an ethics committee. In addition, permission was obtained from the Health Directorate for the pre-research study. The developer of the MCTDS stated in their study that permission for using the scale is not required (11), while permission was obtained from the developer of the NJSS for its use. The participants were informed before starting the study, and written consent was obtained from them using an informed consent form.

RESULTS

The distribution of sociodemographic and work life characteristics of intensive care nurses are given in Table 1.

Table 1: Socio-demographic and work life characteristics of intensive care nurses (N=104)

Characteristics	Category	Number (n)	Percentage (%)
Age	21-29 years	72	69.2
	30 years and older	32	30.8
Gender	Female	77	74.0
	Male	27	26.0
Marital status	Married	36	34.6
	Single	68	65.4
State of education	High school	18	17.3
	Undergraduate	79	76.0
	Postgraduate	7	6.7
Time spent in intensive care	6 months- 1 year	30	28.8
	1 year- 5 years	37	35.6
	More than 5 years	37	35.6
Willingly choose the nursing profession	Yes	83	79.8
	No	21	20.2
Evaluation of working conditions	Good	15	14.4
	Medium	75	72.1
	Bad	14	13.5
Thought of quitting the job	Yes	11	10.6
	No	93	89.4
Feeling safe at work	Yes	61	58.7
	No	43	41.3
Supporting participation in scientific activities	Yes	62	59.6
	No	42	40.4
Receive training in critical thinking	Yes	17	16.3
	No	87	83.7
Association membership	Yes	20	19.2
	No	84	80.8
Nurse certificate	Yes	31	29.8
	No	73	70.2

The participants' mean age is 28.23±5.22, with 74% being female, 65.4% being single, and 76% having an undergraduate education. The nurses have worked in their respective unit for an average of 3.15 years and for an average of 48.67 hours per week, though this is more varied. Of the nurses, 35.6% have been working in intensive care for more than 5 years. 79.8% chose their profession voluntarily, 72.1% state their working conditions to be medium satisfying. Meanwhile, 16.3% of the participants have received critical thinking training, while 80.8% have no membership in any professional association. The mean scores regarding the intensive care nurses' critical thinking dispositions and job satisfaction levels based on the NJSS and MCTDS and their subscales are given in Table 2.

The findings regarding the intensive care nurses' critical thinking dispositions and the variables affecting their job satisfaction are given in two separate tables (Tables 3 and 4) within the scope of the MCTDS and NJSS. While no significant difference was found regarding the MCTDS total score and subscale scores according to the intensive care nurses' age groups ($p>0.05$), a significant difference was found for the NJSS with regard to the subscale of appropriate support from superiors and the total job satisfaction score, with a significant difference ($p<0.05$) occurring in the average scores for individuals in the 21-29 age range.

A significant difference was also found for the MCTDS between the nurses' gender and their total scores on the MCTDS and scores for the subdimensions of seeking truth and systematicity ($p<0.05$). This difference saw a high mean score for males. No significant relationship was found for gender with the NJSS total score or subscale scores ($p>0.05$). Also, while no significant relationship was found between the nurses' marital status and their MCTDS scores ($p>0.05$), a statistically significant difference was found regarding the subscale of reasoning, reaching judgment, seeking evidence, seeking truth, open-mindedness, systematicity ($p<0.05$). Accordingly, single nurses have higher average scores than married nurses. While no significant difference was found between the nurses' education levels and their MCTDS scores ($p>0.05$), a significant difference was found for the subscale of appropriate support from superiors on the

Table 2: Critical thinking dispositions and job satisfaction mean scores (N=104)

	Subscale	n	Mean	SD
NJSS	Positive feelings about the job	104	3.91	0.60
	Appropriate Support from Superiors	104	3.53	1.03
	Perceived Importance in the Workplace	104	4.11	0.44
	Pleasant work environment	104	3.23	0.73
	Job Satisfaction Total	104	3.76	0.48
MCTDS	Reasoning	104	4.26	0.53
	Reaching judgment	104	4.15	0.52
	Seeking evidence	104	4.26	0.56
	Seeking truth	104	4.13	0.54
	Open-mindedness	104	4.21	0.56
	Systematicity	104	4.30	0.49
	Critical Thinking Total	104	4.22	0.45

Table 3. Findings related to the variables affecting the job satisfaction of intensive care nurses (N=104)

Variables	NJSS														
	Positive Feelings About the Job			Appropriate Support from Superiors			Perceived Importance in the Workplace			Pleasant Work Environment			Job Satisfaction Total		
	Mean±SD	t	p	Mean±SD	t	p	Mean±SD	t	p	Mean±SD	t	p	Mean±SD	t	p
Age															
21-29 years (n=72)	3.96±0.62			3.72±0.9			4.11±0.46			3.25±0.69			3.82±0.47		
30 years and older (n=32)	3.8±0.55	1.3	0.196	3.1±1.19	**2.875**	**0.005**	4.1±0.39	0.096	0.923	3.16±0.83	0.573	0.568	3.62±0.47	**2.029**	**0.045**
Gender															
Female (n=77)	3.93±0.54	0.685		3.61±0.95	1.424	0.158	4.11±0.46	0.072	0.943	3.22±0.75	-0.112	0.911	3.78±0.45	0.920	0.360
Male (n=27)	3.84±0.74		0.495	3.29±1.23			4.10±0.39			3.24±0.69			3.68±0.54		
Marital Status															
Married (n=36)	3.87±0.60	-0.500	0.618	3.25±1.19	**-1.989**	**0.049**	4.11±0.42	-0.011	0.991	3.23±0.81	0.082	0.935	3.69±0.52	-1.106	0.271
Single (n=68)	3.93±0.60			3.67±0.91			4.11±0.45			3.22±0.69			3.80±0.45		
State of education															
High school (n=18)	3.98±0.66			4±0.65			4.08±0.48			3.26±0.93			3.88±0.47		
Undergraduate and Postgraduate (n=86)	3.9±0.59	0.541	0.59	3.43±1.07	**2.176**	**0.032**	4.11±0.43	-0.298	0.766	3.22±0.69	0.227	0.821	3.73±0.48	1.21	0.229
Receive training in critical thinking															
Yes (n=17)	4.02±0.60	0.791	0.431	3.38±1.16	-0.655	0.514	4.37±0.38	**2.761**	**0.007**	2.98±0.74	-1.498	0.137	3.79±0.56	0.288	0.774
No (n=87)	3.89±0.60			3.56±1.01			4.06±0.43			3.27±0.72			3.75±0.46		
The state of choosing the profession willingly															
Yes (n=83)	3.96±0.58	1.835	0.069	3.56±0.99	0.557	0.579	4.08±0.45	-1.049	0.297	3.3±0.69	**2.043**	**0.044**	3.79±0.46	1.225	0.223
No (n=21)	3.7±0.64			3.42±1.2			4.2±0.4			2.94±0.81			3.64±0.52		
Thought of quitting the job															
Yes (n=11)	3.31±0.4	**-3.677**	**0.000**	2.86±1.02	**-2.311**	**0.023**	4.07±0.64	-0.254	0.8	2.63±0.75	**-2.944**	**0.004**	3.31±0.42	**-3.405**	**0.001**
No (n=93)	3.98±0.58			3.61±1.01			4.11±0.41			3.3±0.7			3.81±0.46		
Feeling safe at work															
Yes (n=61)	4.06±0.5	**3.233**	**0.002**	3.8±0.95	**3.266**	**0.001**	4.13±0.45	0.585	0.56	3.39±0.74	**2.778**	**0.007**	3.9±0.41	**3.786**	**0.000**
No (n=43)	3.69±0.66			3.15±1.04			4.08±0.42			3±0.66			3.56±0.5		
Support for participation in scientific activities															
Yes (n=62)	3.98±0.56	1.487	0.14	3.88±0.78	**4.615**	**0.000**	4.12±0.44	0.256	0.799	3.34±0.73	1.9	0.06	3.88±0.42	**3.317**	**0.001**
No (n=42)	3.8±0.64			3.01±1.14			4.09±0.44			3.06±0.7			3.58±0.51		
Being a member of a professional association															
Yes (n=20)	3.90±0.61	-0.130	0.897	2.94±1.26	**-2.941**	**0.004**	4.21±0.43	1.132	0.260	3.07±0.74	-1.091	0.278	3.62±0.41	-1.413	0.161
No (n=84)	3.91±0.60			3.67±0.93			4.08±0.44			3.26±0.73			3.79±0.49		
Having a certificate related to nursing															
Yes (n=31)	4.02±0.62	1.24	0.218	3.52±1.1	-0.077	0.938	4.22±0.43	1.725	0.087	3.46±0.79	**2.153**	**0.034**	3.86±0.52	1.493	0.138
No (n=73)	3.86±0.59			3.53±1.01			4.06±0.43			3.13±0.68			3.71±0.45		
Working time in intensive care															
6 months - 1 year (n=30)	4.00±0.55			4.13±0.58		**0.00**	4.07±0.41			3.44±0.67			3.94±0.36		**0.04**
1- 5 years (n=37)	3.89±0.6	0.434	0.65	3.39±0.96	**8.498**	**Post-hoc**	4.05±0.48	1.063	0.35	3.08±0.75	1.993	0.14	3.68±0.53	**3.329**	**Post-hoc**
More than 5 years (n=37)	3.86±0.62			3.18±1.17		**1>2.3**	4.19±0.41			3.2±0.74			3.68±0.47		**1>2.3**
Opinions on working conditions															
Good (n=15)	4.40±0.35		**0.001**	4.08±0.90			4.18±0.48			3.78±0.66		**0.001**	4.15±0.43		**0.001**
Medium (n=75)	3.87±0.59	**7.820**	**Post-hoc**	3.47±1.01	2.887	0.060	4.08±0.42	0.486	0.616	3.18±0.68	**6.955**	**Post-hoc**	3.72±0.45	**7.262**	**Post-hoc**
Bad (n=14)	3.59±0.59		**1>2.3**	3.25±1.14			4.17±0.53			2.85±0.80		**1>2.3**	3.55±0.49		**1>2.3**

NJSS scores and nurses' education level, with a significant difference ($p< 0.05$) showing high school graduate nurses to haver higher scores for this subscale.

When evaluating the data with regard to work conditions, significant differences were found with regard to the scores for the subscales of reaching judgment and seeking truth in MCTDS ($p<0.05$). Significant differences were also found regarding the total score on the NJSS and the scores from the subscales of positive feelings about the job, pleasant working environment, and job satisfaction ($p<0.05$). As a result of the analysis, those who evaluated their working conditions as good were found to have significantly higher scores on NJSS While no significant difference was found between nurses' total MCTDS score and time spent in the intensive care unit ($p>0.05$), a significant difference was found for the subscale of appropriate support from superiors and the total NJSS score in terms of the time spent in the intensive care unit ($p<0.05$). As a result of the analysis, those who've worked in intensive care between 6 months and 1 year are seen to receive more support from their superiors and to have higher job satisfaction compared to those who've worked there for more than one year.

When examining the MCTDS and NJSS findings with respect to the intensive care nurses' critical thinking training status, the MCTDS findings show a significant difference to occur in the total MCTDS score and the subscales of reasoning, reaching judgment, seeking evidence, seeking the truth, open-mindedness, and systematicity, as well as for the NJSS subscale of perceived importance in the workplace ($p<0.05$). The average scores in these areas for those who'd received critical thinking training are significantly higher.

When considering the MCTDS and NJSS findings with respect to the condition of intensive care nurses choosing the profession voluntarily or not, no significant difference is seen for the MCTDS or its subscales ($p>0.05$). According to NJSS findings, however, a significant difference is found regarding the subscale of pleasant working environment subscale ($p<0.05$). In the pleasant work environment, with those who'd chosen the profession willingly having higher scores for this subscale. No significant relationship is seen between nurses' thoughts of quitting and the MCTDS findings ($p>0.05$). According to the NJSS findings, however, a significant difference occurred in the total NJSS score and scores from the subscales of positive feelings about work, appropriate support from superiors, and pleasant work environment ($p<0.05$), with those who did not have thoughts of leaving the job having higher scores on the mentioned subscales.

While no significant relationship was observed between the MCTDS scores and feeling safe at work ($p>0.05$), a significant difference was found for total NJSS score and the scores for the subscales of positive feelings about work, appropriate support from superiors, and pleasant work environment ($p<0.05$), with those who feel safe at work having higher total scores. No significant difference was seen regarding nurses' MCTDS scores and their support status for participating in scientific activities ($p>0.05$). However, a significant difference was seen in the total NJSS score and the score from the subscale of receiving appropriate support from superiors ($p<0.05$), with those who thought that participation in scientific activities was supported to have higher total NJSS scores.

When considering intensive care nurses who have a professional association membership, a significant difference is seen in the MCTDS subscale of systematicity ($p<0.05$), where those who are members of and association have higher scores for this subscale. In addition, a significant difference was found for the NJSS subscale of appropriate support from superiors ($p<0.05$), with the nurses who were not members of an association receiving higher scores on the subscale of appropriate support from superiors.

When examining the MCTDS and NJSS findings with respect to intensive care nurses having or not having a nursing certificate, no significant difference was found regarding nurses' MCTDS scores ($p>0.05$). For the NJSS findings, however, a significant difference was found regarding the subscale of pleasant work environment ($p<0.05$), where those with a nursing certificate are seen to have higher scores on the subscale of pleasant working environment.

Table 5 shows the findings regarding the relationship between intensive care nurses' critical thinking dispositions and job satisfaction levels. As a result of the analysis, the following can be said:

- A low-level significant positive correlation exists for positive feelings about work with reasoning, reaching judgment, seeking evidence, seeking truth, critical thinking and a moderate-level significant positive correlation exists for positive feelings about work relationship exists between open-mindedness ($p<0.05$).
- A moderate-level significant positive relationship exists for perceived importance in the workplace and overall critical thinking as well as the subscales of reasoning, reaching judgment, seeking evidence, seeking truth, open-mindedness, and systematicity ($p<0.05$).
- A low-level significant positive correlation exists between a pleasant working environment and open-mindedness ($p<0.05$).
- A low-level significant positive relationship exists between the overall NJSS score and the MCTDS subscales of reasoning and truth-seeking, as well as moderate-level significant positive relationships for the overall NJSS score with the overall MCTDS score and its subscales of reaching judgment and open-mindedness ($p<0.05$).

DISCUSSION

The sociodemographic and work-related characteristics of the intensive care nurses who participated in the research affect their critical thinking and job satisfaction scores, these findings have been were discussed separately, and finally the relationship between the two concepts will be discussed.

Table 4: Findings related to variables affecting critical thinking dispositions of intensive care nurses (N=104)

Variables	MCTDS													
	Reasoning		Reaching judgment		Seeking evidence		Seeking truth		Open-mindedness		Systematicity		Critical Thinking Total	
	Mean±SD	t/p	Mean±SD	t/p	Mean±SD	t/p	Mean±SD	t/p	Mean±SD	t/p	Mean±SD	t/p	Mean±SD	t/p
Age														
21-29 years (n=72)	4.3±0.53	0.899/	4.16±0.48	0.443/	4.27±0.56	0.332/	4.23±0.55	-0.112/	4.21±0.57	0.000/	4.28±0.47	-0.481/	4.23±0.44	0.299/
30 years and older (n=32)	4.19±0.55	0.371	4.11±0.6	0.658	4.23±0.57	0.74	4.14±0.52	0.911	4.21±0.53	1.000	4.33±0.55	0.632	4.2±0.49	0.765
Gender														
Female (n=77)	4.23±0.51	-1.135/	4.11±0.48	-1.300/	4.20±0.56	-1.879/	4.06±0.53	**-2.413/**	4.16±0.54	-1.737/	4.22±0.48	**-2.595/**	4.16±0.44	**-2.062/**
Male (n=27)	4.37±0.59	0.259	4.26±0.61	0.197	4.43±0.51	0.063	4.35±0.51	**0.018**	4.37±0.60	0.085	4.50±0.49	**0.011**	4.37±0.46	**0.042**
Marital Status														
Married (n=36)	4.28±0.48	0.181/	4.19±0.46	0.577/	4.27±0.54	0.207/	4.11±0.53	-0.290/	4.20±0.55	-0.227/	4.29±0.46	-0.130/	4.22±0.43	0.113/
Single (n=68)	4.26±0.56	0.857	4.13±0.55	0.565	4.25±0.57	0.837	4.15±0.55	0.772	4.22±0.57	0.821	4.30±0.51	0.897	4.21±0.47	0.910
State of education														
High school (n=18)	4.13±0.43	-1.13/	4.08±0.48	-0.631/	4.06±0.62	-1.607/	4±0.5	-1.198/	4.16±0.56	-0.429/	4.09±0.52	-1.924/	4.09±0.43	-1.302/
Undergraduate and Postgraduate (n=86)	4.29±0.55	0.261	4.16±0.52	0.53	4.3±0.54	0.111	4.16±0.54	0.234	4.22±0.56	0.669	4.34±0.48	0.057	4.24±0.45	0.196
Receive training in critical thinking														
Yes (n=17)	4.55±0.42	**2.483/**	4.49±0.43	**3.028/**	4.55±0.47	**2.432/**	4.45±0.52	**2.702/**	4.50±0.50	**2.291/**	4.58±0.43	**2.675/**	4.52±0.42	**3.116/**
No (n=87)	4.21±0.54	**0.015**	4.08±0.51	**0.003**	4.20±0.56	**0.017**	4.07±0.52	**0.008**	4.16±0.56	**0.024**	4.24±0.49	**0.009**	4.16±0.44	**0.002**
The state of choosing the profession willingly														
Yes (n=83)	4.22±0.55	-1.761/	4.13±0.53	-0.908/	4.2±0.56	-2.208/	4.08±0.53	-1.968/	4.18±0.56	-1.151/	4.24±0.49	-2.344/	4.17±0.46	-1.963/
No (n=21)	4.45±0.4	0.081	4.24±0.47	0.366	4.5±0.5	0.029	4.34±0.53	0.052	4.34±0.55	0.252	4.52±0.45	0.021	4.39±0.39	0.052
Thought of quitting the job														
Yes (n=11)	4.42±0.53	1.009/	4.39±0.44	1.632/	4.27±0.68	0.066/	4.13±0.76	-0.02/	4.25±0.76	0.193/	4.2±0.35	1.942/	4.37±0.51	1.138/
No (n=93)	4.25±0.53	0.315	4.12±0.52	0.106	4.26±0.55	0.947	4.13±0.51	0.984	4.21±0.54	0.847	4.25±0.49	0.054	4.2±0.44	0.258
Feeling safe at work														
Yes (n=61)	4.22±0.51	-0.895/	4.12±0.51	-0.592/	4.26±0.56	0.006/	4.12±0.52	-0.366/	4.17±0.54	-0.914/	4.24±0.48	-1.435/	4.19±0.43	-0.816/
No (n=43)	4.32±0.57	0.373	4.18±0.53	0.555	4.26±0.57	0.995	4.16±0.57	0.715	4.27±0.59	0.363	4.38±0.5	0.154	4.26±0.48	0.416
Support for participation in scientific activities														
Yes (n=62)	4.27±0.47	0.052/	4.14±0.47	-0.142/	4.22±0.58	-0.795/	4.1±0.52	-0.786/	4.2±0.55	-0.374/	4.22±0.47	-1.981/	4.19±0.43	-0.666/
No (n=42)	4.26±0.62	0.959	4.16±0.58	0.887	4.31±0.53	0.428	4.19±0.57	0.434	4.24±0.58	0.709	4.41±0.51	0.05	4.25±0.48	0.507
Being a member of a professional association														
Yes (n=20)	4.35±0.54	0.822/	4.20±0.42	0.519/	4.37±0.47	0.998/	4.27±0.47	1.244/	4.38±0.44	1.496/	4.51±0.43	**2.150/**	4.34±0.38	1.320/
No (n=84)	4.24±0.53	0.413	4.14±0.54	0.605	4.23±0.58	0.321	4.10±0.55	0.217	4.17±0.58	0.138	4.25±0.50	**0.034**	4.19±0.47	0.190
Having a certificate related to nursing														
Yes (n=31)	4.31±0.49	0.59/	4.15±0.54	0.026/	4.28±0.45	0.238/	4.15±0.47	0.168/	4.37±0.44	1.811/	4.34±0.45	0.614/	4.26±0.41	0.638/
No (n=73)	4.24±0.55	0.557	4.15±0.51	0.979	4.25±0.6	0.813	4.13±0.57	0.867	4.15±0.6	0.073	4.28±0.51	0.54	4.2±0.47	0.525
Working time in intensive care														
6 months - 1 year (n=30)	4.23±0.47		4.17±0.51		4.20±0.58		4.15±0.48		4.21±0.56		4.21±0.56		4.20±0.44	
1- 5 years (n=37)	4.22±0.52	0.533/ 0.59	4.06±0.45	0.942/ 0.39	4.20±0.58	0.833/ 0.44	4.02±0.58	1.598/ 0.21	4.08±0.61	2.056/ 0.13	4.22±0.44	2.277/ 0.11	4.13±0.44	1.511/ 0.23
More than 5 years (n=37)	4.34±0.6		4.22±0.58		4.35±0.52		4.24±0.53		4.35±0.49		4.43±0.47		4.32±0.47	
Opinions on working conditions														
Good (n=15)	4.48±0.55		4.42±0.47	**5.206/**	4.43±0.49		4.33±0.52	**3.272/**	4.31±0.56		4.43±0.47		4.41±0.45	**3.527/**
Medium (n=75)	4.20±0.52	2.032/ 0.136	4.05±0.48	**0.007**	4.18±0.56	2.506/ 0.087	4.05±0.51	**0.042**	4.17±0.56	1.042/ 0.356	4.24±0.47	1.804/ 0.170	4.15±0.42	**0.033**
Bad (n=14)	4.36±0.56		4.39±0.58	**Post-hoc 1>2.3**	4.48±0.58		4.37±0.62	**Post-hoc 1>2.3**	4.37±0.58		4.46±0.61		4.40±0.54	**Post-hoc 1>2.3**

Table 5: The relationship between critical thinking dispositions and job satisfaction of intensive care nurses (N=104)

MCTDS	NJSS				
	Positive Emotions Related to Work	Appropriate Support from Superiors	Perceived Importance in the Workplace	Enjoyable Working Environment	Job Satisfaction Total Score
Reasoning	**0.24***	0.07	**0.47****	0.16	**0.29****
Reaching judgment	**0.25****	0.09	**0.50****	0.15	**0.31****
Seeking evidence	**0.22***	-0.03	**0.45****	-0.01	**0.19**
Seeking truth	**0.29****	-0.02	**0.52****	0.08	**0.26****
Open-mindedness	**0.31****	0.02	**0.46****	**0.25***	**0.32****
Systematicity	0.09	-0.14	**0.42****	0.04	0.09
Critical Thinking	**0.28****	0.01	**0.56****	0.14	**0.30****

* p<0.05, ** p< 0.01

When considering the sociodemographic and work-related characteristics that affect critical thinking, the variables of being a man, receiving critical thinking training, being a member of a professional association, and having good work conditions stand out. In the comparison made according to gender, male nurses can be said to have a higher tendency to seek truth, systematicity, and critical thinking than female nurses. While findings are seen in the literature stating gender to not affect critical thinking (10,14), studies related to gender and critical thinking have found men to have a higher tendency to think critically than women in different occupational groups (15). In addition, marital status was not found tot affect critical thinking disposition, which parallels other studies (10). The current study also found critical thinking dispositions to be unaffected by educational status. When examining the literature on this subject, although studies are seen to support this finding (16,17), two other studies involving nurses and managerial nurses have stated the critical thinking dispositions of postgraduate nurses to be significantly higher (18,19).

Although the rate of those who received any training on critical thinking (as in-service training or as a course during undergraduate education) among the intensive care nurses was quite low in the current study, they had high levels of critical thinking disposition. This shows the positive effect critical thinking education has on critical thinking disposition as well as the importance of critical thinking education. The fact that choosing the profession voluntarily had no effect on critical thinking disposition was similar to a study conducted with nursing students that found the critical thinking levels of those who'd voluntarily chosen the profession to be no different from those who'd not voluntarily chosen the profession (18).

The current study found no relationship for the intensive care nurses' critical thinking dispositions and parameters such as thinking about leaving the job, feeling safe at work, time spent working in the intensive care unit, having support for participation in scientific activities. Balcı's study similarly found participation in scientific activities to not affect critical thinking disposition (18). In addition, several studies have stated participation in scientific activities to increase the tendency to think critically (2,20). This difference in research results may have been caused by differences in the participation rates in scientific activities or variation in the content of the scientific activities among the different samples. Critical thinking tendencies do not change according to the nurses' work experience. In this case, one can conclude that the length of time work in the unit and therefore the intensive care experience does not change their critical thinking dispositions. This result shows parallels to the results from Arslan et al.'s study (20).

Meanwhile, although a low rate of intensive care nurses evaluated their work conditions as good in the research, they had higher scores on the reaching judgment and seeking truth subscales as well as the overall score for critical thinking disposition. Work conditions affect critical thinking dispositions (19). Therefore, working under good conditions can be said to increase critical thinking disposition.

No relationship was found between being a member of an association and the critical thinking dispositions for intensive care nurses; however, the nurses who are association members make up 20% of the participants, and they received higher scores for the MCTDS subscale of systematicity. Accordingly, association membership can be said to have an indirect relationship with critical thinking, or that employees who have good systematic thinking features are more inclined to become members of a professional association. As a matter of fact, Maraşlı's study (21) stated membership in an association to not relate to nurses' professional values, despite these nurses receiving higher-than-average scores for the subscales of responsibility and security.

When considering the sociodemographic and work-related characteristics that affect job satisfaction, the abundance of relational findings is striking. The factor of age has been determined to affect job satisfaction, with a sense of appropriate support from superiors increasing as age decreases. While the literature has stated job satisfaction to not be affected by age (10,20), one study did conclude job satisfaction to decrease as age increases (8). Burnout related to working over the years can be considered to negatively affect job satisfaction. In addition, participants who are single, high school graduates, and who have no association membership similarly receive more appropriate support from their superiors. The support seen from superiors is thought to be greater for participants with these characteristics; employees in this age are more supported than manager nurses because they are new to the profession, are enthusiastic, and

have less professional experience. While the job satisfaction of high school graduate nurses was found to be higher in the literature, job dissatisfaction has also been found to increase as education status increases (21,22). In addition, managers who support and guide the young nurses who continue to be oriented toward the profession, unit, and institution can be considered normal in their work environment.

The findings on participants' perceptions of positive feelings, pleasant work environment, and job satisfaction who also evaluated their work conditions as good resemble those in the literature (16,21). Therefore, nurses are thought to get more satisfaction from their jobs when they have good work conditions (e.g., wages, promotion opportunities, fair management, balanced night/weekend shifts, leave opportunities, and proper number of employees). Those who've worked in intensive care between 6 months and 1 year have higher job satisfaction. This situation can be interpreted as longer time working in an intensive care unit negatively affecting job satisfaction. Kahraman et al.'s study (8) also found job satisfaction to decrease as the time spent in an intensive care unit increases.

This study determined that the participants who preferred the profession enjoyed their work environments more. The literature has similarly stated that those who willingly choose their profession enjoy their work environments more (8). In addition, intensive care nurses who have no thoughts of quitting and who feel safe at work are seen to have high job satisfaction levels. Other studies, however, have stated the job satisfaction of nurses who do not intend to quit to be very low (22,23). This situation can be thought to possibly be due to the necessity of working in the profession and how the psychological necessity negatively affects job satisfaction. In addition, the sample and work environment characteristics of studies vary. The participants in this study can be thought to easily exercise their legal rights because they work in a state institution, find wage opportunities reliable according to general conditions, which positively affects their job satisfaction and sense of security. In addition, a study related to the subject stated the job satisfaction of those who state that the future of the profession may be good to also be more likely to they find their job reliable (8).

Supporting participation in scientific activities is one of the features in this study that increased job satisfaction. Similar results were obtained in another study (21). However, having a certificate in nursing was found to not affect job satisfaction levels but to positively affect the subscale score for pleasant work environment. Different results have been found in the literature. Namely, one study conducted with nurses found certificate programs to not affect job satisfaction levels but to create significant differences in the job satisfaction subscales (24). Another study on the job motivation of intensive care nurses determined having a certificate to have no effect on job satisfaction (25). The more sufficient practical skills of the intensive care nurses participating in the certificate programs can be considered to make the work environment more pleasant without increasing job satisfaction.

The intensive care nurses in this study have high critical thinking dispositions and moderate levels of job satisfaction. A study conducted abroad stated the critical thinking levels of nurses to generally be high or moderate, while studies in Türkiye have found the critical thinking levels of nurses to generally be at medium or low levels (26). This can be attributed to the change in sample sizes and the study conditions of descriptive studies, as well as the fact that developments in nursing education and approaches positively affect critical thinking dispositions. One study on nurses' job satisfaction in Türkiye found nurses to be the occupational group with the lowest job satisfaction among health professionals (27). Various factors such as workload, work hours, work environment, social value given to the nursing profession, and insufficient salaries can be thought to affect this situation. In addition, as intensive care nurses' critical thinking tendencies increase, their job satisfaction also increases. Similar results have been obtained in the literature (10). Intensive care nurses who have a high tendency to think critically can be said to be more constructive and satisfied in terms of finding solutions to problems, being open-minded, and having positive feelings about work, thus increasing job satisfaction.

CONCLUSION

In line with these results, this study has determined that increasing intensive care nurses' critical thinking dispositions also increases their job satisfaction levels. When looking at the results regarding critical thinking and job satisfaction with respect to intensive care nurses' sociodemographic and work life characteristics, young, single, high-school graduate intensive care nurses are seen to receive more support from their superiors and have higher job satisfaction; in addition, male nurses appear to be able to think more critically. Intensive care nurses' critical thinking dispositions and perceived importance in the workplace were also determined to be higher, with nurses who chose the profession willingly perceiving a more pleasant work environment. Intensive care nurses with high job satisfaction tend to feel safe at work and supported in their participation in scientific activities, to evaluate their work conditions as good, and to not think about quitting. In addition, intensive care nurses who have had critical thinking training, who are a member of a professional association, and who evaluate their work conditions as good also tend to have a high level of critical thinking disposition.

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Informed Consent: Written consent was obtained from the participants.

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Science, Art, and Nursing

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ABSTRACT

The primary purpose of living things is to maintain their life and generation. In humans, this purpose and motive have turned into a way of maintaining a healthy, happy, productive, and meaningful life over time. Philosophy, science, and art have been the most important guides for people to add meaning to their lives and to lead their lives in a meaningful way. Nursing is defined as the only health profession that deals with the healthy/ill individual as a whole with all his/her dimensions, and the science and art aspects are emphasized in all definitions. Nursing is both an art and a science. A successful caregiver cannot be without the other, and has to embody both. Mastering the powerful combination of the art and the science of nursing takes time and experience. When the art and science of nursing are applied together, it is a force to be reckoned with in healthcare. This is what makes nurses so effective and makes a positive impact on patients in their care. Every day, nurses should strive to consciously combine art and science into patient care to achieve the best possible outcomes. In this article, science and art, which are indispensable in human life, will be briefly explained and the science and art aspects of nursing will be discussed.

Keywords: Science, art, nursing, profession

INTRODUCTION

There is no single definition of science that is accepted by everyone, due to its constant change, development, multi-faceted and complex nature, and the lack of boundaries for the subjects, events, and methods it uses. The Turkish Language Association (2022) defines science as "regular knowledge, science that chooses a part of the universe or events as a subject, and tries to draw conclusions by making use of empirical methods and reality" (1). Bekaroğlu (2) emphasizes the definition of science as "an effort to first explain the phenomena about the universe through observation and reasoning based on observation, and then find the laws that connect these phenomena"; Güngören (3) discussed the concept of science as "Science is human activity in constant motion". While Einstein approached science from a rational point of view by defining science as an effort to make harmony between sense data devoid of any order and regular logical thinking, Russell talked about the order in nature and the effort of science to find and express this order (4). Although there is no agreed-upon definition of the concept of science, there are some features found in all definitions. According to these features, science is a way to explain the universe. It is experimental, based on observation and inference, involves imagination and creativity, and can be changed and subjective. It involves exploring, questioning, researching, and problem-solving skills, consists of logical reasoning, is social, and is a part of the cultural structure (2). Science is divided into sub-branches according to the subject and the methods used. These areas are listed below (5):

Natural sciences and sciences, in which natural phenomena and living things are studied. Social sciences study human behavior and social phenomena. Applied sciences where knowledge gained through science is translated into practice. Mathematics, which is similar to and intertwined with both natural sciences and social sciences in some aspects, can be grouped separately. The rapid development and changes in science are among the most important events in world history. For this reason, science has been included in the education programs of schools. The correct and beneficial use of science and scientific knowledge in daily life and in professions has many individual and social contributions (5,6). Knowledge, scientific process skills, and the nature of science are the elements that make up science (5). It is briefly described below as an element of knowledge and science.

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Knowledge and knowing

The Turkish Language Institution (TLI) defined knowledge as "the whole of facts, facts and principles that the human mind can reach, knowledge, knowledge" and "fact, knowledge obtained through learning, research or observation" and stated that it can be used synonymously with science.

Knowledge (knowledge, episteme) is the process of establishing a link between the knower (subject, subject) and the known (object, object) (7). Plato, on the other hand, classified knowledge as knowledge obtained based on appearances (doxa) and knowledge grasped through a dialectical investigation process through reason (8). Today, knowledge is grouped as everyday knowledge (random, empirical knowledge), religious knowledge, art knowledge, philosophical knowledge, technical knowledge, and scientific knowledge (5).

SCIENCE AND NURSING

Nurses having an understanding of science as a concept and having knowledge of its basic features, will provide them with problem-solving skills as well as scientific thinking. The fact that nurses have problem-solving skills within the scope of being critical thinkers is the first condition for accurately identifying and meeting the health needs of the individual and/or their relatives (9).

Although Nursology has an eponymous national journal (Journal of Nursology) and an international website (10) (https://nursology.net, created by Peggy Chinn and Jacqueline Fawcett), Parse (2019) continues to debate the term Nursing Science. According to Parse (11), the purpose of the expression Nursology is to change the name of the nursing discipline (which will create more problems), the meaning and content of nursing science have not yet been clarified, and its distinguishing feature from other disciplines has not yet been determined, and education nursing programs, research, practice methodologies are not based on theory. Parse (11) questions whether nurses will also take the name "nursologists" when such a term of science (nursology) is used. According to Fulton (12), Nursology is a given to the nursing discipline.

The name comes from the Latin nutrix (nurse) and the Greek logos (science). Nursology encompasses nursing knowledge, research and practice methodology, and phenomena that concern nurses. The word Nursology was first proposed by Paterson (13) to denote the development of nursing theory, and Roper (14) used Nursology to name the discipline of nursing. Fulton (12) suggests that nursing practice and nursing science/knowledge should be separated as expressions like other disciplines. While these discussions continue, it should be accepted that nursing is a science and it is to continue to develop according to the elements of science (knowledge, scientific process skills, and the nature of science) (15).

Nursing-specific knowledge; has been significantly improved by studies such as synthesizing concepts-phenomena-paradigms related to nursing according to nursing philosophy, creating conceptual frameworks/models/theories, developing nursing terminology and classification systems in this context, creating-application-evaluation of nursing evidence. The most important indicators of the relationship between nursing and scientific process skills are the nursing process and research (16). The World Health Organization (WHO) defines the Nursing Process as "the systematic use of the scientific problem-solving method in nursing care practices for the benefit of the healthy/ill individual" (17). On the subject of nursing research, although it is mentioned that the research is insufficient in terms of quality and quantity (17), it should be taken into account that nursing, which is a young science, has made serious progress in this regard.

The purpose and result of acquiring nursing knowledge requires knowing nursing. Knowing is a dynamic process, its antecedents being experience, awareness, and reflection. Personal reflection and reflection while living and interacting, want to understand and find meaning as a result of transformation. Nursing cognition is a unique, idiosyncratic type of self-knowledge that consists of objective knowledge that interfaces with subjective perspectives on personal experiences. (18). Knowledge in nursing was classified separately as empirical, aesthetic, personal, and ethical. Chinn and Kramer (10) also included liberating knowledge in these four types of knowing. The types of knowledge in nursing are explained briefly below (9,7,15,19):

1. Empirical Knowledge: It is systematically organized according to scientific principles and represents the knowledge obtained by observations or measurements made according to research methodology.

2. Ethical Knowledge: It covers the necessary information when making decisions about right and wrong, good and bad, desirable and undesirable, and morals expressed through rules and ethical knowledge.

3. Self-Knowledge: It represents knowledge that focuses on self-awareness and empathy, and is related to one's self, originality, and uniqueness.

4. Aesthetic Knowledge: In interaction with the individual in need of health, meaningfulness is the perception of what is important and it is related to the artistic aspect of nursing.

5. Independent Knowledge: The potential of a person is his awareness of his social, cultural, and political situation and his level of critical thinking. The nurse, who has the liberating consciousness of knowing, becomes aware of injustices and inequalities and takes responsibility for their creation and implementation.

As a result, the knowledge acquired through different ways of knowing is used to meet the nursing care needs of the individual. "Spiritual knowledge" has been added to the types of knowledge listed above and it is stated that it will make an important contribution to the provision of care by taking into account the spiritual nature of the human being (15,19). The Turkish Nurses Association (1981) defines nursing as "a

health discipline consisting of science and art responsible for the planning, organization, implementation, evaluation, and education of nursing services to protect, develop and improve the health and well-being of the individual, family, and society" (20). In this section, the scientific aspect of nursing has been discussed. In the following, aesthetics, and the art aspect of nursing will be explained.

AESTHETICS AND ART

The concept of aesthetics, which derives from the suffix "aisthētá" and "ikos", meaning things that can be perceived with the sense organs in Ancient Greek, is used as "aesthetisch" in German, in the meaning of beauty theory, and "ésthetique" in French. Aesthetics, in its Turkish form and its origin from the Turkish word "bedii" meaning beautiful, beauty, was used as "bediyat ve ilm-i bedayi" in the sense of the science of beauty. According to TLI (1), aesthetics; is "the theoretical science of beauty in art and life with the general laws of artistic creation, beautiful sense, beauty, beauty", "related to the sense of beauty", "appropriate to the sense of beauty" and "the branch of philosophy that deals with beauty and the effects of beauty on human memory and emotions as subjects" is defined as "good sense"(21).

Aesthetics consists of two parts: the philosophy of aesthetics (aesthetic subject and object, aesthetic judgment, aesthetic value, aesthetic attitude) and art as the philosophy of aesthetic phenomena or phenomena, the scope of artistic creativity, and the philosophy of art that focuses on the status of the work of art (22). The first part, the ontology of aesthetics, consists of the aesthetic judgment given after the aesthetic subject, who has a certain sense of taste, turns to the aesthetic object with a certain aesthetic value, with a special attitude or approach called aesthetic (22).

In the philosophy of art, which is the second main division of aesthetics; instead of the aesthetic experience of natural products, concepts and problems related to works of art are discussed (22). Aristotle stated that art emerged concerning one of three different types of activity in human beings. These activities are (1) understanding, learning, or knowing (theoria), (2) acting (praxis), (3) creating or producing something (poiesis). In the production activity, either useful things (crafts) with a use value or beautiful things (art) with aesthetic value are created (22). The equivalents of craft and art concepts in ancient Greece are "tekhne" and "ars".

Tekhne is "the power to do, ability, talent, craft; the regular way of doing something; cunning, ingenuity, trickery, a means of doing or obtaining something, means, procedure, style, custom, tool; art is defined as a skill, craft, profession, a product or work of art, while ars is defined as "method, method, means; art, craft; mastery, talent, skill (in any art); work of art, moral quality virtue, play, trickery, deceit, cunning. In this period, tekhne and ars could not be separated from each other with certain boundaries and expressed the ability of people to manufacture and perform. Another important point here is that talented people as craftsmen or artists are also gracious people (23).

In TLI, art is defined as "All of the methods used in the expression of a feeling, design, beauty, etc. or the superior creativity that emerges as a result of this expression", "Expression created by the understanding and taste standards of a certain civilization or community", "Demonstrated in doing something". while "mastery" was defined as "all the rules to be followed in a profession", it was stated that it could be used synonymously with craft.

Craft, on the other hand, is defined as "work, art, and craft that requires experience, skill and mastery along with learning, done to meet people's material needs", and "works that require handcraft" (1). The issue of nursing as a science is discussed as well as being an art. However, while defining Tekhne and ars in Ancient Greece, examples such as the art of military service and the art of medicine were given. In this context, the use of the expression "nursing art" would not be wrong, considering the definition of art in TLI. In addition, the definition of nursing as a craft has been criticized from time to time and it has been emphasized that it is an art. To contribute to these discussions, the relationship between aesthetics, art, and nursing is explained below (24).

AESTHETICS, ART, AND NURSING

As the philosophy of aesthetic phenomena or phenomena, the elements of aesthetics are subject and object, judgment, value, and attitude (22). In terms of the nursing profession, the aesthetic subject is the human, colleagues, healthcare team members, and society who need nursing care, while the aesthetic object is care. Aesthetic judgment, on the other hand, is what emerges as a result of the communication and interaction of the aesthetic subject and object. The attitude toward aesthetic values in the nursing care process represents the nurses' willingness to fulfill their roles and responsibilities and their desire to achieve the best in their work (24).

In the philosophy of art, which is the other dimension of aesthetics, concepts, and problems related to works of art are discussed. The nature of nursing art is explained with the concepts of care, compassion, and communication. It requires personal wisdom and intuition and is seen as the product of an aesthetic lived experience. It can also be healing, transformative, and empowering for the healthy/sick individual. The expected results of the art of nursing are the results of the individual who needs health care such as safety and satisfaction (25). According to the systematic compilation study by Johnson (26), the themes that represent the art of nursing are listed below:

- Nurse's ability to comprehend the meaning of encounters with healthy/ill individuals.
- Nurse's ability to establish a meaningful bond with the healthy/healthy/ill individual.
- Nurse's ability to perform nursing activities skillfully.
- Nurse's ability to rationally determine nursing actions.
- Nurse's ability to conduct nursing practice morally.

The acrostic classification made by Brunt (21) to explain the scope of nursing art is given below:

N "Nurturing": Nurses support individuals and/or their relatives and their relatives in need of health care, and their skills in this regard are developed through nursing education and practice.

U "Understanding": The nurse understands the beliefs and values, ideals, feelings, and thoughts of healthy/sick individuals and their relatives, and gives the individual and their relatives an understanding of what is going on. Effective communication skills are essential in developing understanding.

R "Respect": Nurses respect the healthy/sick individual's autonomy and the right to be informed, the right to refuse care and treatment, and undertake their advocacy when necessary.

S "Synthesis and self-care": Nurses synthesize information from nursing and other disciplines to provide optimal care that the individual needs. The synthesis of this information and the development of nursing intuition, play an important role in the diagnosis and care of the individual with experience. In addition to maximizing the health of the healthy/ill individual, the nurse should adopt a healthy lifestyle and in this context, eat well, exercise, pay attention to sleep patterns, get medical help when necessary, and be a role model in the area of health.

I "Independent thinking and judgment": The roles and responsibilities of nurses are increasing and therefore they need to make more independent and clinical decisions. As a result of this situation, nurses use assessment, evaluation, and critical thinking skills more. Nurses spend more time with patients than any other discipline. Therefore, nurses are in an ideal position to detect cues and changes in a patient's condition and take appropriate action to cope with these changes.

N "Negotiation": The nurse frequently uses the interview method to determine the health needs of the individual, obtain informed consent about the care, and determine the level of knowledge about the treatment, monitoring, and evaluation of the care and treatment.

G "Giving of oneself and caring": The essence of nursing is care. When nurses develop a caring relationship by considering cultural values and beliefs, their interactions with individuals and their relatives increase. Health, human care, and improvement will come to the fore in the future of nursing. Nurses often use their feelings of compassion during care, and with this compassion, love, and care, they can make a significant difference in people's lives.

CONCLUSION

The roles and responsibilities of nurses are constantly changing, and accordingly, nursing practices are becoming more complex. New theories, techniques, skills, and tools must be developed and used in practice to meet the nursing care needs of a highly technological, complex, and dynamic society. To achieve this, nursing must be recognized as a science and an art. Thus, nursing will be analyzed according to the elements of both science and art and its development will be continued appropriately.

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Case Reports: There is limited space for case reports in the journal and reports on rare cases or conditions that constitute challenges in diagnosis and treatment, those offering new therapies or revealing knowledge not included in the literature, and interesting and educative case reports are accepted for publication. The text should include Introduction, Case Presentation, Discussion, and Conclusion subheadings. Please check Table 1 for the limitations for Case Reports.

Letters to the Editor: This type of manuscript discusses important parts, overlooked aspects, or lacking parts of a previously published article. Articles on subjects within the scope of the journal that might attract the readers' attention, particularly educative cases, may also be submitted in the form of a "Letter to the Editor." Readers can also present their comments on the published manuscripts in the form of a "Letter to the Editor." Abstract, Keywords, and Tables, Figures, Images, and other media should not be included. The text should be unstructured. The manuscript that is being commented on must be properly cited within this manuscript.

Table 1. Limitations for each manuscript type

Type of manuscript	Word limit	Abstract word limit	Reference limit	Table limit	Figure limit
Research Article	4000	250 (Structured)	35	6	5 or total of 10 images
Review	5000	250	50	6	10 or total of 15 images
Case Report	1000	200	15	No tables	4 or total of 8 images
Letter to the Editor	400	No abstract	5	No tables	No media

Tables

Tables should be included in the main document, presented after the reference list, and they should be numbered consecutively in the order they are referred to within the main text. A descriptive title must be placed above the tables. Abbreviations used in the tables should be defined below the tables by footnotes (even if they are defined within the main text). Tables should be created using the "insert table" command of the word processing software and they should be arranged clearly to provide easy reading. Data presented in the tables should not be a repetition of the data presented within the main text but should be supporting the main text.

Figures and Figure Legends

Figures, graphics, and photographs should be submitted as separate files (in TIFF or JPEG format) through the submission system. The files should not be embedded in a Word document or the main document. When there are figure subunits, the subunits should not be merged to form a single image. Each subunit should be submitted separately through the submission system. Images should not be labeled (a, b, c, etc.) to indicate figure subunits. Thick and thin arrows, arrowheads, stars, asterisks, and

similar marks can be used on the images to support figure legends. Like the rest of the submission, the figures too should be blind. Any information within the images that may indicate an individual or institution should be blinded. The minimum resolution of each submitted figure should be 300 DPI. To prevent delays in the evaluation process, all submitted figures should be clear in resolution and large in size (minimum dimensions: 100 × 100 mm). Figure legends should be listed at the end of the main document.

All acronyms and abbreviations used in the manuscript should be defined at first use, both in the abstract and in the main text. The abbreviation should be provided in parentheses following the definition.

When a drug, product, hardware, or software program is mentioned within the main text, product information, including the name of the product, the producer of the product, and city and the country of the company (including the state if in USA), should be provided in parentheses in the following format: "Discovery St PET/CT scanner (General Electric, Milwaukee, WI, USA)"

All references, tables, and figures should be referred to within the main text, and they should be numbered consecutively in the order they are referred to within the main text.

Revisions

When submitting a revised version of a paper, the author must submit a detailed "Response to the reviewers" that states point by point how each issue raised by the reviewers has been covered and where it can be found (each reviewer's comment, followed by the author's reply and line numbers where the changes have been made) as well as an annotated copy of the main document.

Accepted manuscripts are copy-edited for grammar, punctuation, and format. Once the publication process of a manuscript is completed, it is published online on the journal's webpage as an ahead-of-print publication before it is included in its scheduled issue. A PDF proof of the accepted manuscript is sent to the corresponding author and their publication approval is requested within 2 days of their receipt of the proof.

References

The journal uses the NLM reference system. While citing publications, preference should be given to the latest, most up-to-date publications. If an ahead-of-print publication is cited, the DOI number should be provided. Authors are responsible for the accuracy of references. Journal titles should be abbreviated in accordance with the journal abbreviations in Index Medicus/ MEDLINE/PubMed. When there are six or fewer authors, all authors should be listed. If there are seven or more authors, the first six authors should be listed followed by "et al." In the main text of the manuscript, references should be cited using Arabic numbers in parentheses. The reference styles for different types of publications are presented in the following examples.

Journal Article: Blasco V, Colavolpe JC, Antonini F, Zieleskiewicz L, Nafati C, Albanèse J, et al. Long-termoutcome in kidneyrecipientsfromdonorstreatedwithhydroxyethylstarch 130/0.4 andhydroxyethylstarch 200/0.6. Br J Anaesth 2015;115(5):797-8.

Book Section: Suh KN, Keystone JS. Malaria and babesiosis. Gorbach SL, Barlett JG, Blacklow NR, editors. Infectious Diseases. Philadelphia: Lippincott Williams; 2004.p.2290-308.

Books with a Single Author: Sweetman SC. Martindale the Complete Drug Reference. 34th ed. London: Pharmaceutical Press; 2005.

Editor(s) as Author: Huizing EH, de Groot JAM, editors. Functional reconstructive nasal surgery. Stuttgart-New York: Thieme; 2003.

Conference Proceedings: Bengisson S. Sothemin BG. Enforcement of data protection, privacy and security in medical informatics. In: Lun KC, Degoulet P, Piemme TE, Rienhoff O, editors. MEDINFO 92. Proceedings of the 7th World Congress on Medical Informatics; 1992 Sept 6-10; Geneva, Switzerland. Amsterdam: North-Holland; 1992. pp.1561-5.

Scientific or Technical Report: Cusick M, Chew EY, Hoogwerf B, Agrón E, Wu L, Lindley A, et al. Early Treatment Diabetic Retinopathy Study Research Group. Risk factors for renal replacement therapy in the Early Treatment Diabetic Retinopathy Study (ETDRS), Early Treatment Diabetic Retinopathy Study KidneyInt: 2004. Report No: 26.

Thesis: Yılmaz B. Ankara Üniversitesindeki Öğrencilerin Beslenme Durumları, Fiziksel Aktivitelerive Beden Kitle İndeksleri Kan Lipidleri Arasındaki Ilişkiler. H.Ü. SağlıkBilimleriEnstitüsü, DoktoraTezi. 2007.

Manuscripts Accepted for Publication, Not Published Yet: Slots J. The microflora of black stain on human primary teeth. Scand J Dent Res. 1974.

Epub Ahead of Print Articles: Cai L, Yeh BM, Westphalen AC, Roberts JP, Wang ZJ. Adult living donor liver imaging. DiagnIntervRadiol. 2016 Feb 24. doi: 10.5152/dir.2016.15323. [Epub ahead of print].

Manuscripts Published in Electronic Format: Morse SS. Factors in the emergence of infectious diseases. Emerg Infect Dis (serial online) 1995 Jan-Mar (cited 1996 June 5): 1(1): (24 screens). Available from: URL: http://www.cdc.gov/ncidodlElD/cid.htm.

SUBMISSION CHECKLIST

Please make sure you have the followings available:

- Acknowledgement of the study "in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration in the materials and methods section.
- Statement that informed consent was obtained after the procedure(s) had been fully explained in the materials and methods section. Indicating whether the institutional and national guide for the care and use of laboratory animals was followed as in "Guide for the Care and Use of Laboratory Animals".
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  - Abstract (250 words). (Case report's abstract limit is 200 words)
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  - References
  - All tables
  - The title, description or footnotes of all illustrations (figures)

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