Investigating the Image of the Profession of Nursing in the Society in the COVID-19 Pandemic Process: A Cross-Sectional Study

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ABSTRACT

Objective: This study was conducted to investigate the image of the profession of nursing in the society in the COVID-19 pandemic process. **Materials and Methods:** The study is of the cross-sectional descriptive type. The sample was determined with the snowball sampling method. The questionnaire forms were sent online to the participants between 15 August and 1 September 2020. 1020 individuals who responded to the questionnaires were included in the study. A Descriptive Information Form and the Nursing Image Scale (NIS) were used to collect the data. The data were analyzed with descriptive statistics, independent-samples t-test and ANOVA. **Results:** There were significant differences in the mean NIS general view and communication subscale scores based on gender, in the mean NIS total and subscale scores based on marital status, educational level, occupation, place of residence, having a nurse relative working during the pandemic and view towards the profession of nursing and in the mean NIS occupational and educational qualities subscale score based on hospitalization during the pandemic process ($p<0.05$). **Conclusion:** It was found in the study that the image of nursing in the society was positive in the pandemic period.
Keywords: Covid-19, Nursing Image, Pandemic, Society.

COVID-19 Salgını Sürecinde Hemşirelik Mesleğinin Toplumdaki İmajının İncelenmesi: Kesitsel Bir Çalışma

ÖZ

Amaç: Araştırma, COVİD-19 salgını sürecinde hemşirelik mesleğinin toplumdaki imajının incelenmesi amacıyla yapıldı. **Gereç ve Yöntem:** Kesitsel tanımlayıcı türdedir. Araştırmanın örneklemi, kartopu örneklem tekniği ile belirlendi. Anket formları 15 Ağustos-1 Eylül 2020 tarihleri arasında online olarak katılımcılara gönderildi. Anketlere geri dönüş sağlayan 1020 kişi araştırmaya dahil edildi. Verilerin toplanmasında Tanıtıcı Bilgi Formu ve Hemşirelik İmaj Ölçeği (HİÖ) kullanıldı. Veriler, tanımlayıcı istatistik, bağımsız gruplarda t testi ve ANOVA testleri ile değerlendirildi. **Bulgular:** Bireylerin cinsiyete göre HİÖ genel görünüm ve iletişim alt boyutu puan ortalamaları arasında, medeni durum, eğitim düzeyi, mesleği, yaşadığı yer, çalışan hemşire yakını ve hemşirelik mesleğine karşı bakış açısına göre HİÖ toplam ve alt boyut puan ortalamaları arasında ve hastaneye yatışa göre HİÖ mesleki ve eğitsel nitelikler alt boyutu puan ortalamaları arasında istatistiksel olarak anlamlı fark olduğu saptandı ($p<0.05$). **Sonuç:** Araştırmada, pandemi döneminde toplumda hemşirelik imajının olumlu yönde olduğu bulundu.
Anahtar Kelimeler: Covid-19, Hemşirelik İmajı, Pandemi, Toplum.

INTRODUCTION

Pneumonia cases with unknown cause were reported in the city of Wuhan in China by the World Health Organization (WHO) on 31 December 2019. Chinese officials defined the cause of the cases as a novel coronavirus (COVID-19). On 20 January 2020, COVID-19 which was showing a rapid spread was declared as an emergency by WHO (*WHO Coronavirus Disease (COVID-19) Dashboard*, 2020). Following this, after stating that 118,000 cases had been encountered in 114 countries, and 4,291 people had died, WHO declared COVID-19 a pandemic on 11 March 2020. The first case in Turkey was reported on 11 March 2020, and the first virus-related death was seen on 17 March 2020 (Çevirme & Kurt, 2020). By 8 November 2020, there has been 49,578,590 positive cases in the world, and due to this virus, 1,245,717 patients have lost their lives. In Turkey, while the stated number of positive cases was 391,739, the number of deaths was reported as 10,803 (*WHO Coronavirus Disease (COVID-19) Dashboard*, 2020). As the number of cases increased, various precautions started to be taken, and still, precautions continue to be taken on a broad spectrum (Özdin & Bayrak Özdin, 2020; Yang et al., 2020).

In the risk assessment of the virus that has emerged in a broad area worldwide and affected several people by crossing international borders, it is stated that healthcare workers are in the primary risk group. In this process, nurses have been worked for weeks, in long shifts and without any leave. Many got infected with the COVID-19 virus and lost their lives due to lack of suitable personal protective equipment (Catton, 2020). According to the report by the International Council of Nurses (ICN), the number of nurses who died after getting infected with COVID-19 increase in August from 1,097 to 1,500, and 15% of the COVID-19-positive cases consisted of healthcare workers, most of whom were nurses (*International Council of Nurses (ICN)*, 2020). In this process, events experienced by nurses, who have a significant place in the health system, in the pandemic period have been widely included on social media. In the literature, it was stated that news stories about nurses increased by 3 times even in the first months of the COVID-19 pandemic (Bennett et al., 2020). In the pandemic period, the media has frequently included news stories showing the images of exhausted nurses who have bruises on their faces after wearing protective masks for hours while looking after COVID-19 patients and the personal sacrifices of nurses. In the media, nurses are shown as heroes working in the frontline in the fight against COVID-19 (Bennett et al., 2020; Catton, 2020). In addition to patient-nurse relationships, the perception of the society on nurses is also affected by mass communication tools and the image of a nurse portrayed by the media (Glerean et al., 2017; Kalisch et al., 2007; Rezaei-Adaryani et al., 2012; Rubbi et al., 2017). A study determined that inclusion of news reflecting the struggle shown by nurses in disaster periods such as epidemics and earthquakes in the media affects the image of nursing

positively (Mohammed, Peter, Killackey, & Maciver, 2021).

As in other professions, the views and expectations of the society are important in terms of the development of the profession of nursing (Çelik et al., 2013). Therefore, how the profession of nursing is perceived by the society in its development process is important. The literature review that was conducted did not reveal any study investigating the effects of the COVID-19 pandemic process on the image of nursing. In this study conducted in line with this information, it was aimed to investigate the image of the profession of nursing in the society in the process of the COVID-19 pandemic.

MATERIALS AND METHODS

Study type

This is a cross-sectional and descriptive study conducted for the purpose of investigating the image of the profession of nursing in the process of the COVID-19 pandemic.

Study group

The study was carried out in Eastern Turkey between 15 August and 1 September 2020. The population of the study consisted of individuals over the age of 18 years who were living in Eastern Turkey. The sample of the study was determined with the non-random sampling method of "snowball sampling". Based on this sampling method, the data collection forms prepared with the Google Docs platform were sent to individuals over the age of 18 online (e-mail, WhatsApp) at the data of the study, and the individuals were asked to fill out the forms and share the links with individuals over the age of 18 around them. The study was completed with 1020 individuals who responded to the data collection forms.

Based on the percentage measurement values on the methods to be studied in the conducted literature review (Özdelikara et al., 2015; Tortumluoğlu et al., 2010), with an effect size of 0.10257, power of 95% and error rate of 0.05, the sample size required for the study was calculated with the G-POWER software as n=1020. With the power analysis, it was determined that the collected data were sufficient.

Dependent and independent variables

The independent variables of this research are gender, age, Occupation, marital status, educational level, place of residence. The dependent variable is image of nursing in the society.

Procedures

The data of the study were collected by using a Descriptive Information Form and the Nursing Image Scale.

Descriptive information form: This questionnaire which was prepared by the researchers in line with the literature (Dinç et al., 2010; Özdelikara et al., 2015; Tortumluoğlu et al., 2010) consisted of questions on the descriptive characteristics such as the individuals' age, gender, marital status, educational level, Occupation and place of residence, as well as information on the topic such as having a nurse relative working in the pandemic process,

status of hospitalization and views towards nursing care and profession.

Nursing Image Scale (NIS): The scale was developed by Özsoy, but its psychometric properties were not assessed (Özsoy, 2000). The form was turned into a scale by conducting the necessary analyses by Çınar and Demir (Çınar & Demir, 2010). The scale consists of 28 items towards measuring the image of nursing in the society. The scale consists of three subscales as General View, Communication and Occupational and Educational Qualities. These subscales consist of 7, 6 and 15 items, respectively. The scale items are scored as Agree=3, Somehow Agree=2 and Disagree=1. This 3-point Likert-type scale has a total score range of 28-84. Higher total scores indicate a more positive nursing image (Çınar & Demir, 2010; Özsoy, 2000). The Cronbach's Alpha coefficient of the scale was reported as 0.81 (Çınar & Demir, 2010). In this study, the Cronbach's Alpha value was also found as 0.81.

Statistical analysis

The data were analyzed by using the SPSS 25.0 (the Statistical Package for the Social Sciences) statistical package software. Normal distribution was tested with Shapiro-Wilk normality test and Q-Q plots. The descriptive statistics were analyzed by using independent-samples t-test and one-way analysis of variance (ANOVA). The level of statistical significance was accepted as $p < 0.05$.

Ethical considerations

For this study, ethical approval from the Non-Interventional Clinical Studies Ethics Board of Siirt University (E.509), written permission from the Ministry of Health and written consent from the participants who volunteered for the study were obtained.

RESULTS

In the study, it was determined that the mean age of the participants was 26.50 ± 7.49, 68.5% were female, 69.9% were single, 55.3% had undergraduate degrees, 28.1% were working as civil servants, 71.0% were living in the city center, 64.0% had nurse relatives working in the pandemic period, 97.4% were not hospitalized in the pandemic period, 93.0% did not receive care from nurses in the pandemic period, the views of 53.3% towards the profession of nursing changed in the positive direction in the pandemic period (Table 1).

Table 1. Sociodemographic characteristics of the study group.

Descriptive Characteristics	n	%
Gender		
Female	699	68.5
Male	321	31.5
Marital Status		
Single	713	69.9
Married	307	30.1
Educational Level		
Literate-Primary-Secondary School	77	7.5
High School	145	14.2
Associate's	173	17.0
Undergraduate	564	55.3
Postgraduate	61	6.0
Occupation		
Unemployed	176	17.3
Laborer	78	7.6
Civil Servant	287	28.1
Freelancer	93	9.1
Homemaker	80	7.8
Teacher	131	12.8
Others	175	17.2
Place of Residence		
Village	100	9.8
District-town	196	19.2
City Center	724	71.0
Do you have a nurse relative working in the pandemic period?		
Yes	653	64.0
No	367	36.0
Were you hospitalized during the pandemic process?		
Yes	27	2.6
No	993	97.4
Did you receive care from a nurse in the pandemic period?		
Yes	71	7.0
No	949	93.0

Table 1. (Continue) Sociodemographic characteristics of the study group.

Descriptive Characteristics	n	%
Did your view towards the profession of nursing change in the pandemic process?		
Changed positively	544	53.3
Did not change	425	41.7
Changed negatively	51	5.0
Mean age	26.50±7.49	

*Column percentage

In the study, the participants' mean total NIS, general view, communication and occupational and educational qualities scores were found respectively as 68.77±7.35, 16.34±2.64, 14.85±2.87 and 37.57±4.34 (Table 2).

Table 2. Distributions of the NIS scores of the participants (n=1020).

NIS and Subscales	Number of items	Min. Score	Max. Score	$\overline{X}$±SD	Cronbach's alpha
General View Dimension	7	7	21	16.34±2.64	0.68
Communication Dimension	6	6	18	14.85±2.87	0.84
Occupational and Educational Qualities Dimension	15	15	45	37.57±4.34	0.72
Total NIS	28	28	84	68.77±7.35	0.87

X:Mean, **SD:**Standard deviation.

There was a significant difference in the NIS general view and communication subscale scores of the participants based on their gender (p<0.05). There were significant differences in their NIS total and subscale scores based on marital status, educational level, occupation, place of residence, having a working nurse relative and views towards the profession of nursing (p<0.05). There was also a significant difference in the NIS occupational and educational qualities scores based on hospitalization status (p<0.05) (Table 3).

Table 3. Comparison of the NIS mean scores based on the participants' demographic characteristics (n=1020).

Descriptive Characteristics	NIS Total and Subscale Scores (X±SD)			
	General View	**Communication**	**Occupational and Educational Qualities**	**Total NIS**
Gender				
Female	16.17±2.66	14.74±2.94	37.614.19	68.76±7.40
Male	16.70±2.57	15.10±2.72	37.48±4.65	68.76±7.25
Test value and p	t=-2.94 **p=0.03**	t=-1.89 **p=0.05**	t=0.45 p=0.65	t=-0.07 p=0.94
Marital status				
Single	16.55±2.58	15.21±2.72	37.94±4.32	69.68±7.16
Married	15.85±2.72	14.03±3.05	36.70±4.26	66.66±7.37
Test value and p	t=3.89 **p=0.00**	t=6.11 **p=0.00**	t=4.23 **p=0.00**	t=6.12 **p=0.00**
Educational status				
Literate-Primary-Secondary School	17.20±2.51	15.55±2.17	37.67±4.12	70.00±5.72
High School	15.94±2.60	14.73±2.76	37.014.43	68.02±7.56
Associate's	17.02±2.47	15.40±2.76	37.79±4.52	69.79±7.27
Undergraduate	16.21±2.66	14.75±2.96	37.78±4.26	68.79±7.40
Postgraduate	15.42±2.57	13.68±2.92	36.21±4.38	65.95±7.72
Test value and p	F=8.10 **p=0.00**	F=5.57 **p=0.00**	F=2.56 **p=0.03**	F=4.03 **p=0.00**

X:Mean, **SD:**Standard deviation.

Table 3. (Continue) Comparison of the NIS mean scores based on the participants' demographic characteristics (n=1020).

Descriptive Characteristics	NIS Total and Subscale Scores (X±SD)			
	General View	**Communication**	**Occupational and Educational Qualities**	**Total NIS**
Occupation				
Unemployed	16.48±2.55	14.95±2.84	37.23±4.64	68.62±7.65
Laborer	16.25±2.61	15.052.82	37.29±4.42	68.39±7.01
Civil Servant	15.82±2.80	14.21±2.96	37.03±4.18	67.28±7.03
Freelancer	17.13±2.46	15.39±2.84	38.18±3.89	70.26±6.72
Homemaker	16.30±2.60	14.66±2.81	36.86±4.04	67.92±7.16
Teacher	16.66±2.46	15.18±2.95	39.19±3.95	71.03±7.32
Others	16.44±2.60	15.28±2.61	37.72±4.58	69.44 ±7.62
Test value and p	F=3.78 **p=0.01**	F=4.03 **p=0.00**	F=4.80 **p=0.00**	F=5.26 **p=0.00**
Place of Residence				
Village	16.76±2.60	15.37±2.73	38.31±3.63	70.34±6.95
District-town	16.69 ± 2.64	15.26±2.67	37.92±4.60	69.46±7.44
City center	16.18 ± 2.63	14.67±2.93	37.37±4.34	68.37±7.35
Test value and p	F=4.28 **p=0.01**	F=4.94 **p=0.00**	F=2.85 **p=0.05**	F= 4.25 **p=0.01**
Do you have a nurse relative working in the pandemic process?				
Yes	16.60±2.59	15.19±2.75	38.07±4.08	69.82±6.95
No	15.87±2.66	14.25±2.99	36.68±4.63	66.91±7.68
Test and Significance	t=4.29 **p=0.00**	t=5.04 **p=0.00**	t=4.97 **p=0.00**	t=6.16 **p=0.00**
Were you hospitalized during the pandemic process?				
Yes	16.51±2.95	14.00±3.70	35.70±5.36	67.25±9.39
No	16.33±2.63	14.88±2.85	37.62±4.30	68.81±7.29
Test value and p	t=-0.35 p=0.72	t=-1.57 p=0.11	t=-2.27 **p=0.02**	t=-1.08 p=0.27
Did you receive care from a nurse in the pandemic process?				
Yes	16.54±3.05	14.42±3.34	36.91±4.72	67.97±8.27
No	16.32±2.61	14.89±2.83	37.62 ± 4.31	68.83±7.28
Test value and p	t=-0.68 p=0.49	t=-1.32 p=0.18	t=-1.32 p=0.18	t=-0.95 p=0.34
Did your view towards the profession of nursing change in the pandemic process?				
Changed positively	17.03±2.43	15.70±2.40	38.50±3.83	70.94±6.28
Did not change	15.67±2.52	14.01±2.87	36.68±4.31	66.59±6.99
Changed negatively	14.49±3.41	12.82±4.20	35.07±6.62	63.84±11.96
Test value and p	F=48.91 **p=0.00**	F=60.69 **p=0.00**	F=31.52 **p=0.00**	F=60.07 **p=0.00**

X:Mean, **SD:**Standard deviation.

DISCUSSION

According to the findings obtained in this study, it was determined that the participants' total NIS and the general view, communication and occupational and educational qualities subscale scores were in the positive direction (Table 2). In a similar study to ours conducted by Rubbi et al. on the nursing perceptions of the society, it was found that the image of nursing was positive (Rubbi et al., 2017). In their study on 481 individuals over the age of 18, Tortumluoğlu et al. stated that the image of the society towards nurses was positive (Tortumluoğlu et al., 2010). Similar results were obtained in studies in the literature on different populations (Bozkır et al., 2008; Ekinci et al., 2014; Özdelikara et al., 2015; Özpancar et al., 2008). As opposed to the finding in our study, Takase et al. determined that the social image of nurses was not on a desired level as the job they did was uncertain in the eyes

of the society (Takase et al., 2006). Another study also found the image of nursing in the society to be low (Elmorshedy et al., 2020). Likewise, there are also other studies in the literature which contradicted the results of our study (Dinç et al., 2010; Tan et al., 2010). The nursing image in the society is also affected by what is read, viewed and heard from the media (Kalisch et al., 2007). As these studies have been conducted at different times and considering that this study was conducted in the pandemic period, it may be considered that showing nurses as heroes on the media and frequently including their fight against the pandemic in the media affected the image of nursing positively.

In the study, it was found that there was a significant difference in the NIS general view and communication subscale scores of the individuals based on gender, and the scores of the men were higher (Table 3). In difference to our study, the study by Çelik et al. on individuals over

the age of 18 did not find a significant relationship between gender and nursing image (Çelik et al., 2013). The study by Özkan et al. on nursing students found that gender did not affect nursing image scores (Kızılcık-Özkan et al., 2017). It is thought that the fact that men have started to be included in the profession of nursing affected the image of nursing in the men positively. Based on all these studies, it may be stated that nursing image varies based on individual characteristics.

There was a significant difference in the NIS total and subscale scores based on marital status, and the scores of the single participants were higher (Table 3). The heavy working conditions of nurses may have affected the nursing image of the married participants negatively. Additionally, the fact that most of the participants in our study (69.9%) were single may have affected this result.

There was a significant difference in the NIS total and subscale scores based on educational levels (Table 3). As the educational level of the participants increased, their nursing image turned towards more negative. This result may have been affected by that the profession of nursing is not considered as an independent profession, but it is thought of as assistive healthcare personnel, whereas the fact that there are differences in the education levels of nurses, and their salaries are found to be low may have led the university graduate participants to look at the profession negatively.

It was found that there was a significant difference in the NIS total and subscale scores based on occupation, and the scores of the participants who were teachers were higher (Table 3). As opposed to the case in our study, in a study conducted with individuals over the age of 18 at a city center, it was found that the image of nursing was more positive among those who were freelancers (Çelik et al., 2013). In the study by Eskimez et al. conducted with the purpose of determining the views of female high school senior students towards the profession of nursing, it was determined that 66.7% of those whose fathers were not working considered choosing the profession of nursing, while 19.7% of those whose fathers were civil servants considered choosing the profession (Z. Eskimez et al., 2008). It may be stated that the type of profession that individuals have and their socioeconomic level affect their nursing image.

It was ascertained that there was a significant difference in the NIS total and subscale scores based on the participants' places of residence, where those living in villages had higher scores (Table 3). It may be stated that the increase in the need for nursing services among those living in regions where access to healthcare services is limited affects the image of the profession positively.

It was found that there was a significant difference in the NIS total and subscale scores based on the participants' status of having a nurse relative working in the pandemic process, and the scores of those with nurse relatives were higher (Table 3). The study by Çelik et al. also found that the nursing image of those who had a nurse relative in their family was more positive (Çelik et al., 2013). In the study by Tortumluoğlu et al., 79.4% of the participants stated that there were nurses among their close relatives

(Tortumluoğlu et al., 2010). Eskimez et al. determined that students who had nurse relatives had higher rates of preferring nursing as a profession (Z. Eskimez et al., 2008). The results of these studies were in parallel with the results of ours. However, there are also studies which reported that the presence of a family member working as a nurse affected nursing image negatively (Degazon et al., 2015; Kay M, 2015). The differences among studies' findings may be related to the time periods in which these studies were conducted. Considering especially that this study was conducted in the pandemic period, the close witnessing of the individual sacrifices of nurses in this process by their relatives may have affected the nursing image of the relatives positively.

There was a significant difference in the NIS occupational and educational qualities scores based on hospitalization status, and those that were hospitalized in this process had higher scores (Table 3). Tortumluoğlu et al. determined that 58% of the society had positive experiences in their communication with nurses (Tortumluoğlu et al., 2010). It may be thought that, especially due to the isolation of patients hospitalized in the pandemic period, the fact that no family members were accepted as visitors or attendants, and all necessities were met by nurses affected nursing image positively.

A significant difference was found in the NIS total and subscale scores based on views towards the profession of nursing in the pandemic process (Table 3). It may be stated that highly frequent inclusion of the events experienced by nurses in the pandemic process on the media and nurses' heroic fight against the pandemic by risking themselves despite poor working conditions changed the society's views towards the profession in the positive direction.

Limitations of Study
The first limitation of this study is that only individuals who could be reached online participated in the study. Moreover, instead of a random sampling method, a snowball sampling method was used, which might have caused sampling bias.

CONCLUSION
As a result of this study, it was found that the mean scores of nursing image in the society in the pandemic process were positively higher in comparison to those in previous studies. In this pandemic process, it is thought that it was effective for nurses to serve their duties 24/7 by working in the frontlines and making compromises from their families and for this to be included frequently on social media.

It was determined that the number of studies on the social image of nurses conducted in different populations was very low. Therefore, it may be recommended to conduct more studies towards the image perceptions of the society on the profession of nursing and increase awareness regarding the importance of image in line with the obtained results.

Author Contributions
Plan, design: ZB, MA；**Material and methods:** ZB, MA；**Data analysis and comments:** ZB；**Writing and corrections:** ZB, MA

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