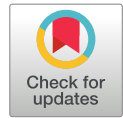# CURARE
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Attitudes of Nursing Students, Nurses and Public Towards to Nursing Profession and Associated Factors During the COVID-19 Pandemic: A Cross-Sectional Study

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Abstract

Objective: This descriptive cross-sectional study aimed to evaluate the attitudes of nursing students, nurses, and members of the public towards the nursing profession during the COVID-19 pandemic and to identify factors associated with these attitudes.

Methods: The study was conducted online between August and December 2020. The sample consisted of 356 nursing students, 323 nurses, and 304 public participants. Data were collected using the Attitude Scale for Nursing Profession (ASNP). Data was analysed through descriptive statistics, Student's t-test, one way ANOVA, and multiple regression analysis.

Results: The mean ASNP score was 166.80±13.11 for nursing students, 161.54±14.33 for nurses and 158.15±17.75 for the public. The findings indicated that nursing students exhibited significantly more positive attitudes towards the profession compared to nurses, who in turn held more favourable views than public members (p<0.001). Among nursing students, variables such as voluntarily choosing the nursing department, perceiving an increase in the value of nursing during the pandemic, type of university attended, and family support during career selection were significantly associated with their attitudes (R²=0.215, p<0.001). For nurses, attitudes were significantly influenced by pandemic-related stigma, gender, reduced motivation to work, considerations of resignation, fear of transmitting the virus to family members, and educational attainment (R²=0.130, p<0.001). In the public group, gender, improved perception of the nursing profession post-pandemic, and having a family member diagnosed with COVID-19 were significant predictors of attitudes (R²=0.128, p<0.001).

Conclusion: Enhancing public attitudes towards the nursing profession may be achieved by disseminating accurate information regarding nurses' educational background, professional roles, and contributions to healthcare through mass media, thereby increasing their visibility and societal recognition.

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INTRODUCTION

The Coronavirus Disease 2019 (COVID-19), which broke out in December 2019 in Wuhan City in China and spread quickly all over the world, was declared as a Pandemic on March 11, 2020 (1). The COVID-19 pandemic severely constrained the healthcare system worldwide (2,3). Although they were experienced and trained, healthcare providers, including nurses, were not ready for the chaos that they would experience during the pandemic (4,5). While nurses were trying to provide care to their patients at the frontlines during the pandemic, they were face to face with too many problems (3,6).

As well as all the health care providers, nurses also experienced uncertainty on account of ever-growing case number, work overload, personal protective equipment distress, shortage of effective drugs for the treatment, and continuous information change during that period (6). Quarantina measures forced many nurses to remain isolated from their families and friends. They had to manage not only ongoing family responsibilities, such as child care- but also their patients and the personal risk of contracting the virus (5). Many healthcare professionals became infected, and a substantial number lost their lives.(7). In addition to these, health care providers were faced with experiencing stigma because of COVID-19 (5,8,9).

In the studies carried out, it was determined that the mental health of nurses was affected negatively during the COVID-19 pandemic period. They experienced high levels of depression, anxiety, insomnia, boredom, and fatigue and were reported to experience stress more frequently than other healthcare providers (4,6,8). Despite these problems, as a member of the nursing team, nurses were found to participate willingly in the patient care of COVID-19 patients for leading the pandemic well and continuing their effectiveness (7,10).

During the COVID-19 pandemic, the active struggle of healthcare providers and nurses received significant attention in the media and newspapers (11). In the news, the responsibilities and roles of health care providers, the problems they experienced, their personal rights, and their social images ranked (3,11). For years, negative portrayals of nurses in media, television, and films have contributed to a distorted public image of the nursing profession (12). It has been notified that the work environment, work values and social images are effective in the professional identity development in nursing (13). However, the public often holds stereotypical and inaccurate views of nurses,-such as portraying them as angels, doctor's assistants, or sexy nurses- which undermines the profession's status and identity. This condition is one of the greatest obstacles ahead of nursing as a profession (13,14). Also, the community is not aware of the qualifications that nurses need for their jobs. Social nursing image is profoundly affected by nurses' invisibility and their presenting styles of themselves(14). In order to increase the image of nursing and the professional development of the nursing profession, realist and accurate explications are needed regarding what nurses do at their jobs (15).

In the studies carried out before the pandemic, the perceptions of nursing students, the public and nurses for the nursing profession were determined to be positive and moderate (16-18). It was stated that the community did not entirely understand nurses' responsibilities and job and perceived the nursing profession as a subsidiary job. (19). At the same time, nurses have been overlooked as autonomous healthcare providers and their status has often been diminished by negative stereotypes in the media (20). Nevertheless, during the pandemic period, nurses were described as heroic, devoted, and having a strong sense of decency in the media (21). Within this period, almost all the contents of newspapers and media were positive, indicating that the struggles of healthcare providers during pandemic were realized (11,21). This increased visibility may have contributed to strengthening the public image of nursing. Indeed, the 2025 Gallup Ratings of Honesty and Ethics in Professions ranked nurses as the most trusted professionals among 23 occupations (22). It was declared that the pandemic period contributed to nurses' better perception of their professional nursing roles and their professional identity development (23,24). It was found that during this period, the motivations and professional job perceptions of nursing student improved.(3,21,25).

It has been stated that a major crisis, such as the COVID-19 pandemic, affecting human life in all its bearings might shape the identities of certain professions dealing with the pandemic (24). For this reason, the pandemic period is evaluated as an opportunity in the structuring of the professional identity of the nursing profession (21). A study examining the online news coverage before and after the COVID-19 pandemic on the positioning of the nursing profession revealed an increase in the number of articles that positively portrayed the nursing profession after the pandemic (20). The COVID-19 pandemic period is a critical period in order to determine the factors affecting the attitudes towards the nursing profession, to apply effective strategies and improve professional image. In this study, three different groups of nursing students, nurses, and the public were chosen to provide a comprehensive understanding of attitudes towards the nursing profession during the

pandemic. By combining these three groups, the study aims to explore how the pandemic affected the perceptions of nursing both from within the profession and from the public.

In this context, the study was conducted to determine the attitudes of nursing students, nurses, and the public towards the nursing profession during the COVID-19 pandemic. In particular, the study aimed to explore how attitudes towards to nursing profession differed among these three groups and to identify the factors influencing their perspectives during the pandemic period.

METHODS

Study Design and Participants

This research is a descriptive cross-sectional research. The sample calculation in the study was performed using the formula for an unknown population (26). The calculations revealed at a 99.9% confidence interval that the sample group would have to be 270 nursing students, 270 nurses and 270 participants from the public.

Among the criteria for inclusion in the research, as well as being a student at the department of nursing at university for nursing students, working as an active nurse for nurses, being at the age of 18 and over for participants of the public, having a smart phone to fill the question forms accessing the internet and computer, being in Turkey during pandemic period, and being volunteer to attend the research were also ranked. The people who were not carrying these criteria were left out of the research. The research was performed with 356 nursing students, 323 nurses and 304 participants from the public.

Data Collection

The study data were collected online using Google Form between August and December 2020. With the snowball sampling method, the Google Form was shared with the participants residing in different places (big city, province, district, village) via email/ Whatsap/Facebook in accordance with the principle of voluntary participation.

Instruments

Data were collected using a socio-demographic and COVID-19 information form prepared by researchers and the Attitude Scale for Nursing Profession (ASNP).

Sociodemographic and COVID-19 information form

Nursing students form consisted of 11 questions such as age, gender, class, university type, choosing the nursing department willingly and parents' support for this choice, chronic disorder, mental disorder presence, the history of

COVID-19 experience and state of thinking that nursing gains value in the pandemic.

The nurse form consisted of 13 questions, such as age, gender, education level, working hours, chronic disorder, mental disorder presence, the history of COVID-19 experience, the history of COVID-19 experience in the family, thinking to leave the job during the pandemic, the change in the will to work, fearing from infecting the family with COVID-19, exposure to stigma due to the profession during the pandemic.

The public form consisted of 13 questions such as age, gender, education level, presence of a nurse in the family, chronic disorder, mental disorder presence, the history of COVID-19 experience and the point of view of the nursing profession after the COVID-19 pandemic.

Attitude Scale for the Nursing Profession (ASNP)

ASNP was developed by Çoban and Kaşıkçı (2011) for the purpose of determining the attitudes of nursing students, nurses and the communities regarding the nursing profession (Cronbach alpha=0.91) (28). The ASNP consists of 40 items and includes three subscales; the properties of the nursing profession, the preference for the nursing profession and the general position of the nursing profession. Items are scored from 1 to 5 (1 = totally disagree to 5 = totally agree). The min-max score that will be taken from the scale is between 40 and 200. As the score taken from the scale increases, the positive attitude towards to nursing profession increases (25). In this study, the ASNP Cronbach alpha values were found to be 0.80 for nursing students, 0.88 for nurses, and 0.90 for participants from the public.

Data Analysis

The data were evaluated using the SPSS 25.0 program (IBM SPSS Statistics for Windows, Armonk, NY: IBM Corp.) The appropriateness of the data to the normal distribution was assessed with the skewness/kurtosis test, and it was determined that the data indicated a normal distribution. Descriptive statistics (percentages, means, and standard deviation), the Student's t test, and the one-way Anova test were used in the data analysis. Stepwise multiple regression analysis was performed to identify factors associated with attitudes towards the nursing profession. Variables that showed a significant relationship with ASNP in bivariate analyzes were included in the model. Significance was evaluated at the $p < 0.05$ level.

Ethical Considerations

This study was conducted in accordance with the principles outlined in the Declaration of Helsinki. Ethics

committee approval (09.07.2020-12/209) and Ministry of Health permission were obtained for the implementation of the study. In the e-mail/ WhatsApp, participants were informed about the purpose of the study, and those that marked the "I agree with participating in the survey" expression at the top of the Google Form were requested to fill out the form. Data collection and recording via the Google Form were managed by the researcher and limited to only one response.

RESULTS

The mean age of nursing students was 20.35±1.43 and 89.9 % of them were female. The mean age of nurses was 28.77±6.88 and 89.8 % of them were female. The mean age of the public participants was 36.05±10.88 and, 73.4% of them were female. The other sociodemographic characteristics of the participants are shown in Table 1.

Table 1. Socio-demographic and COVID-19 related characteristics of nursing students, nurses and public

Variables	Nursing student (n=356) Mean±SD	Nurse (n=323) Mean±SD	Public (n=304) Mean±SD
Age	20.35±1.43 (18-24)	28.77±6.88 (21-54)	36.05±10.88 (18-64)
Working time (months)		83.55±89.64 (0-396)	
	n (%)	n (%)	n (%)
Gender			
Female	320 (89.9)	290 (89.8)	223 (73.4)
Male	36 (10.1)	33(10.2)	81 (26.6)
Educational status			
Middle school and below			51 (16.7)
High school		29 (9.0)	64 (21.1)
Associate degree		21(6.5)	
Bachelors degree		195 (60.4)	189 (62.2)
Master's degree		76 (23.5)	
Doctorate		2 (0.6)	
University type			
State university	182 (51.1)		
Foundation university	174 (48.9)		
Class			
1st class	89 (25.0)		
2nd class	87 (25.0)		
3rd class	93 (26.1)		
4th class	87 (24.4)		
Willingly choose the nursing department			
Yes	263 (73.9)		
No	93 (26.1)		

Variables	Nursing student (n=356) Mean±SD	Nurse (n=323) Mean±SD	Public (n=304) Mean±SD
Parent's support status when choosing a profession			
No	63 (17.7)		
Yes	293 (82.3)		
Presence of a nurse in the family			
Yes	184 (51.7)		237 (78.0)
No	172 (48.3)		67 (22.0)
Thinking that nursing gains value in the pandemic			
Yes	269(75.6)		
No and undecided	87 (24.4)		
COVID-19 experience			
Yes	30 (8.4)	75 (23.2)	14 (4.6)
No	326 (91.6)	248 (76.8)	290 (95.4)
COVID-19 experience in the family			
Yes	234 (65.7)		125 (41.1)
No	122 (34.3)		179 (58.9)
Having chronic disorder			
Yes	21 (5.9)	49 (15.2)	58 (19.1)
No	335 (94.1)	274 (84.8)	246 (80.9)
Having mental disorder			
Yes	18 (5.1)	7 (2.2)	8 (2.6)
No	338 (94.9)	316 (97.8)	296 (97.4)
Fear of infecting their family with COVID-19			
Yes		316 (97.8)	
No		7 (2.2)	
Exposure to stigma due to the profession during pandemic			
Yes		209 (64.7)	
No		114 (35.3)	
The thinking to leave the job during pandemic			
Thinking		151 (46.7)	
Not thinking		172 (53.3)	
Change in the will to work in the pandemic			
Decreasing		209 (64.7)	
Increasing / unchanged		114 (35.3)	
Changing the view of the nursing profession in the pandemic			
Hasn't changed			98 (32.2)
Has changed positively			206 (67.8)
Total	356 (100)	323 (100)	304 (100)

The mean score of nursing students was 81.24±6.35 for the properties of the nursing profession subscale, 49.04±9.55 for the prefer to nursing profession subscale, 36.51±34.18 for the general position of the nursing profession subscale, and 166.80±13.11 for the total ASNP score. For nurses, the mean score was 81.38±6.54 for the properties of the nursing profession subscale, 45.96±9.10 for the prefer to the nursing profession subscale, 34.18±2.47 for the general position of nursing profession subscale, and 161.54±14.33 for the total ASNP score. In the public group, the mean score was 79.60±9.05 for the properties of the nursing profession subscale, 45.74±9.80 for the prefer to the nursing profession subscale, 32.80±3.29 for the general position of nursing profession subscale, and 158.15±17.75 for the total ASNP score (Table 2).

Table 2. Comparison of the ASNP mean scores of nursing students, nurses, and the public

Nursing student / Nurse / Public	n	ASNP and Subscales			
		Properties of nursing profession	Prefer to nursing profession	General position of nursing profession	ASNP Total
		Mean±SD	Mean±SD	Mean±SD	Mean±SD
Nursing student[1] (n=356)	356	81.24±6.35	49.04±9.55	36.51±34.18	166.80±13.11
Nurse[2] (n=323)	323	81.38±6.54	45.96±9.10	34.18±2.47	161.54±14.33
Public[3] (n=304)	304	79.60±9.05	45.74±9.80	32.80±3.29	158.15±17.75
Statistical evaluation	F	5.654	12.856	110.989	27.729
	p	0.004**	0.000***	0.000***	0.000***
	Difference	1,2>3	1>2,3	1>2>3	1>2>3

ASNP: Attitude Scale for Nursing Profession
** $p < 0.01$; ***$p < 0.001$

The properties of the nursing profession subscale mean scores of nursing students and nurses were found to be significantly high in terms of statistics in regard to the mean scores of the public (p<0.01). The prefer to nursing profession of nursing students' subscale mean scores were found to be significantly high in terms of statistics in regard to mean scores of nurses and the public (p<0.001). The general position of the nursing profession subscale and the ASNP total mean score of nursing students were found to be higher than the nurses scores, and the nurses' scores were found to be higher than the scores of the public, and it was determined that there were significant differences among them in terms of statistics (p<0.001) (Table 2).

A significant relation was found among the nursing student's attitudes towards the nursing profession and choosing the nursing department willingly (β=0.368, p<0.001), thinking that the nursing profession gained value during the pandemic, (β=0.162, p<0.01), the type of the university (β=-0.119, p<0.05) and family support status while choosing the job (β=0.118, p<0.05). These variables explain 21.5% of the total variance in the attitudes towards the nursing profession for nursing students (R²=0.215, p<0.001) (Table 3).

A significant relation was found among nurses' attitudes towards the nursing profession and exposure to stigma due to the profession during the pandemic (β=0.161, p<0.01), gender (β=0.146, p<0.01), decrease in the will of work during the pandemic (β=-0.144, p<0.05), thinking to leave the job during the pandemic (β=-0.134, p<0.05), fear of infecting the disease to the family (β=0.120, p<0.05) and education status (β=-0.105,p<0.05). These variables explain 13% of the total variance in the attitudes towards the nursing profession for nurse's (R²=0.130, p<0.001) (Table 4).

A significant relation was found among the public's attitudes towards the nursing profession and gender (β=0.233, p<0.001), age (β=0.143, p<0.01), the positive increase in the view to the nursing profession after the pandemic (β=0.122, p<0.05) and the existence of a person who had COVID-19 in the family (β=0.114, p<0.05). These variables explain 12.8% of the total variance in the attitudes towards the nursing profession for participant's (R²=0.128, p<0.001) (Table 5).

Table 3. Multiple regression analysis of factors associated with nursing students' attitudes towards the nursing profession

Attitudes towards the nursing profession	R²	ΔR²	F	p	B	β	t	p
Constant	0.215	0.206	23.999	0.000***	153.237		71.521	0.000***
University type					-3.121	-0.119	-2.500	0.013*
Willingly choose the nursing department					10.974	0.368	7.581	0.000***
Parent's support status when choosing a profession					4.045	0.118	2.430	0.016*
Thinking that nursing gains value in the pandemic					4.927	0.162	3.414	0.001***

* $p < 0.05$; ** $p < 0.01$; ***$p < 0.001$

Table 4. Multiple regression analysis of factors associated with nurses' attitudes towards the nursing profession

Attitudes towards the nursing profession	R²	ΔR²	F	p	B	β	t	p
Constant	0.130	0.114	7.891	0.000***	156.755		22.217	0.000***
Gender					6.886	0.146	2.770	0.006**
Educational status					-1.813	-0.105	-1.991	0.047*
Fear of infecting their family with COVID-19					11.819	0.120	2.247	0.025*
Exposure to stigma due to the profession during pandemic					4.83	0.161	2.916	0.004**
The thinking to leave the job during pandemic					-3.857	-0.134	-2.326	0.021*
Change in the will to work in the pandemic					-4.322	-0.144	-2.441	0.015*

* $p < 0.05$; ** $p < 0.01$; ***$p < 0.001$

Table 5. Multiple regression analysis of factors associated with public' attitudes towards the nursing profession

Attitudes towards the nursing profession	R²	ΔR²	F	p	B	β	t	p
Constant	0.100	0.091	11.145	0.000***	145.950		62.015	0.000***
Gender					9.882	0.247	4.491	0.000***
Changing the view of the nursing profession in the pandemic					4.767	0.126	2.227	0.027*
COVID-19 experience in the family					4.204	0.117	2.072	0.039*

* $p < 0.05$; ** $p < 0.01$; ***$p < 0.001$

DISCUSSION

At the end of this research, the attitudes of nursing students, nurses and the public towards the nursing profession during the COVID-19 pandemic was determined to be at midlevel. The attitudes of nursing students towards the nursing profession were found to be more positive considering nurses and the attitudes of nurses towards the nursing profession were found to be more positive considering the public. It has been stated that struggling against the COVID-19 crisis has affected the nursing image among the community, nurses, and nursing students (3,21). It was determined that during the COVID-19 pandemic, nursing students adopted a positive manner against the nursing profession. Also, they were aware of the values that nursing has and they didn't think to leave the job (19,29-31). It was found that during this period the nurses were affected from a psychosocial point of view, felt sensually hectic and although their work load increased, their devotion to the job was at midlevel and their satisfaction was high (32). It has been declared that the nursing profession is among the most trusted jobs and ranks at the top and has professional values (33), but the community sees the nursing profession as a subsidiary job and does not understand nurses' roles and responsibilities entirely (19). It has been stated that the

COVID-19 pandemic may shape the identities of some of the professions that cope with the pandemic, and due to this, this period must be assessed as an opportunity in the structuring of the professional identity of the nursing profession (21,27). In order to improve the attitudes towards the nursing profession during this period, a lot of responsibilities for nurses, nursing associations, and organisations have been assigned.

In this research it was determined that attitudes towards the nursing profession for those who chose the nursing profession willingly and who had support from their families while choosing the profession, who thought the nursing profession gained value during the pandemic and foundation university students' were more positive. Today, it is stated that the socioeconomic status and cultural level of the family play an important role in the teenagers' choice of profession and teenagers who have financial difficulties in their families especially prefer popular professions that they can find jobs easily (3,34). The nursing profession is a preferred job because it presents career, employment and mobility range (35). In the studies carried out, it was determined that family and friends played a significant role in the choice of nursing profession and participants chose nursing profession because it is a profession that helps people and includes care (35,38). In this research, the attitudes of nursing students towards the

nursing profession, those who had support from their families while choosing the profession and those who chose the nursing department willingly were more positive.

The attitudes of nursing students of foundation universities for nursing profession were more positive compared to state university nursing students. Because education is paid in foundation universities, it is thought that these students mostly choose the nursing profession willingly and therefore their attitudes towards the profession are more positive. In Güven's study (2019), the attitudes of students to the nursing profession were found to be more positive for those who want to choose the nursing profession (37). In the studies performed, the nursing career decision and occupational choice scores of students who chose the nursing profession willingly were found higher (38,39). It was seen that students' choosing the nursing profession willingly and their family support affected their attitudes for nursing profession positively. For this reason, the preferences of students who really want to be a nurse are important in terms of the professional identity of the nursing profession.

In the present study, 75.6% of the students thought that the nursing profession gained value during the pandemic and the perceptions of students for the nursing profession were seen more positive for those who thought in this way. In the study of Zhang and his friends (2021), 86% of the nursing students stated that their nursing image increased during the pandemic (3). In the studies carried out, during the COVID-19 pandemic the professional identities of the nursing students were found to be at midlevel and the professional identity scores of students who were thinking to leave the nursing profession were found lower (3,19). In Taş and Dalcalı's study (2021), although a great majority of the nursing students preferred the profession willingly, most of them stated that their professional motivation was affected negatively during the pandemic period (25). At the beginning of the pandemic, the reasons like the existence of too many uncertainties, the existence of too many cases and death numbers, the problems experienced in the health facilities, non–existence of vaccines and effective treatments that are developed against the disease frightened the nursing students and depending on this, it is thought that their perceptions regarding the nursing profession was affected negatively. It has been emphasised that in the professional identity development of nursing students care, team work, integrity, knowledge, clinical application, experience and role models are important (40). Therefore, during the pandemic period, it is important that nursing students continue their clinical applications and theoretical lessons by taking necessary precautions.

During the COVID-19 pandemic period, nurses battled against the disease on the frontlines by taking responsibility in patient care and treatments. At the beginning of this period, nurses were face to face with urgent, intensive and unforeseen events, they couldn't find protective equipment, they worked overtime and they experienced disappointments especially in the environment where there were too many unknown things relating to COVID-19 disease (4-6). The working environments of nurses and their profession values have been reported to be effective in the professional identity development of nursing (13). In this study, a great number of factors affecting the attitudes of nurses relating to the nursing profession throughout the pandemic were determined. Considering the nursing profession, the general attitudes of nurses who were female, whose work stress increased during the pandemic period, who were scared of infecting their family and who were exposed to stigma due to their professions, were more positive. However, the attitudes of nurses' towards the nursing profession were more negative for those whose education level was high, who thought to leave the job and whose working desire diminished during the pandemic. In Turkey and in the world, females comprise majority of the nurses (41,42). In this study, females comprised the majority of the nurse participants and the general attitudes of female nurses relating to the nursing profession were positive. In the literature, just as there are studies whose perceptions relating to the nursing image of females are higher (43,44), studies showing that men's higher professional image perception have been encountered (21,45). Because most people choosing the nursing profession are female, it is thought that the nursing profession perception is more positive in the females. With the increase in the number of male nurses, the profession perceptions of male nurses for the profession may also change in a positively.

As the education level of nurses increased, their attitudes of them for the nursing profession were determined to be affected negatively. Godsey et al. (2014) reported that education differences in the nursing profession contributed to nurses' incoherent images oriented to nursing profession (12). It is thought that nurses whose education level was high and those whose professional expectations were higher and the difficulties they experienced during this period that not much was known led to this condition. González-Gil et. al. (2021), it was emphasised that during the pandemic, nurses who had advanced education feared less from making mistakes, felt less lack of knowledge and experienced less insomnia (46).

During the pandemic, as in all over the world, due to the increased case number and health policies, limitations were brought to the health providers' leaving the job, retirement

and their taking vacations in Turkey as well (47). It was reported that during this period, the professional satisfaction of nurses decreased and there was an increase in their psychological problems and their will for leaving their job (6,9,48). In the current research, the general attitudes of nurses relating to the nursing profession and nurses who thought to leave the job and whose will to work decreased during the pandemic were more negative. In the study carried out with health care providers including nurses in China, it was determined that they were worried because health care providers were scared of infecting their families (49). In addition to these, during the pandemic, health care providers were exposed to stigma and discrimination because of the infecting risk of the disease to their environment (5,8,9). In the current study, the attitudes towards the nursing profession were more positive for the ones that feared to infect their families and for those that were exposed to stigma due to their job during the pandemic.

In every condition, nurses try to struggle for the recovery of the patients and for the end of the pandemic in this period and continue to work by jeopardising their lives and their families' lives. It was explained that nurses whose professional perceptions were high had more engagement desire for patient care of those with COVID-19 (10). When we think that the pandemic such as COVID-19 may again occur in the global world, in order to succeed in health care, contents oriented to increasing nurses' professional perceptions should be included in the nursing education, on the other hand, regulations should be made in the government policies to enhance the working conditions of nurses.

In the study, nursing profession towards to attitudes from public participants, those whose point of view to nursing changed in a positive way after the pandemic, those who female and those whose family member experienced COVID-19 were more positive. In the study of Midilli et al., (2017), it was stated that the nursing profession attitudes of female patients were more positive (50). In Turkey and in the world majority of nurses are female and giving patient care, one of the roles of nurses is consubstantiated with traditional female role (41,42). Therefore, it is thought that nursing profession attitudes of female participants are more positive considering men. In the literature, it is reported that the public is not aware of the qualifications necessary for the nursing profession and social nursing image is affected from nurses ' invisibility and from the style of nurses' presenting themselves (14). It was found that the appearance of positive news relating to health care providers on media during the pandemic period and the description of nurses as heros or heroines and

their commitment contributed to the development of nursing image in the public (11,21). In the current research, 67.8% of the participants' views to nursing profession were determined to change in a positive way after the pandemic. Those whose view changed in a positive way after the pandemic were found to be more positive for nursing profession attitudes. Social image of nursing also affects the professional identity of nursing profession (13). Hence, nurses should work harder to express their professionalism to the public and they should be visible (14). In order to enhance the professional image of nursing, the pandemic period should be seen as an opportunity (21). When this period is evaluated well, a positive contribution to the professional nursing development will be provided by increasing the social nursing image.

The COVID-19 pandemic led to an enormous health crisis worldwide and led to a lot of people's ailments and death and this pandemic is still leading to so many problems (2). In our country, from 2022 January 7th, the number of COVID-19 infected people is 9.85 million and the mortality rate is 83.388 (51). The experiences of patients relating to nursing profession lead to biased views about nursing by affecting the communities' nursing perception (12). In the current study, it is seen that the participants whose family member / members experienced COVID-19 are more positive to nursing profession attitudes. Because of COVID-19 infection, individuals needed health care and nursing care. Since the beginning of the pandemic, nurses who were in the frontline in the care of individuals who experienced COVID-19 infection have been officiating their professional roles under unusual working conditions (6,7). During all this period, it has been thought that such reasons like patients' and patient relatives' witnessing to the nurses' devoted labour and due to their care need more than ever notion have contributed positively to their perception of nursing profession.

Limitations

The limitation of the research is that the participation should be voluntarily and the participants should be reached via Facebook, WhatsApp and such social media. The results of the study are limited with their samples. Because the data were gathered depending on self-reports, the responds were limited with the answers that the participants gave. Though there are some limitations, the current study is a strong study with regard to its being a guide to regulations for increasing nursing profession attitudes and it is also important in determining the attitudes of student nurses and public participants to nursing profession during COVID-19 pandemic and the factors affecting them.

CONCLUSION

At the end of the research, it was seen that during COVID-19 pandemic, the attitudes of nursing students, nurses and public towards to nursing profession were at midlevel and the attitudes of nursing students to nursing profession were more positive when compared with nurses and nurses were more positive when compared with the public. The attitudes to the nursing profession for students who chose the nursing department willingly, who think nursing gained value during pandemic, and who were supported by their families while choosing the profession were more positive. The nursing profession attitudes of nurses who were scared of infecting COVID-19 their families, those who were female, and who were exposed to stigma due to their jobs during the pandemic were positive. In the public the attitudes of participants whose family members experinced COVID-19, whose point of view for nursing profession changed positively after the pandemic and females were more positive.

The results of this study can be used in forming programmes oriented to the development of professional image of nursing. In order to change the attitudes of public for nursing profession in a positive way, sharing of real data related to the nurses' roles, responsibilities, education, how they contribute to the patient care should be provided on media. It is so important that necessary interferences for stereotype descriptions brought from the past should be followed by nursing associations and organizations and sentimentality among nurses about this issue should be improved. To enhance the image of nurses in the public, it is necessary that they also increase their visibility. For the visibility of the nursing profession, social media, you tube and mass media (television, radio, newspaper etc.) should be used actively and especially it is crucial that nursing associations should be more active on this issue.

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