# **Original Paper**

# An Examination of the Relationship between Fear of Coronavirus (COVID-19) in First Year Nursing Students and Their Attitudes to the Profession

DILEK YILMAZ<sup>1</sup>, DERYA UZELLI YILMAZ<sup>2</sup>

<sup>1</sup>Department of Nursing, Bursa Uludağ University, Bursa, Turkey

<sup>2</sup>Department of Nursing, İzmir Katip Çelebi University, İzmir, Turkey

ABSTRACT: This study was conducted with the aim of determining the fear of coronavirus (COVID-19) and attitudes to the profession in first year nursing students, and examining the relationship between them. The descriptive study was conducted in April and May 2021 with first year students at the Nursing Department of Bursa Uludağ University. The research sample consisted of 156 students who participated voluntarily in the study. A Student Description Form, a Coronavirus (COVID-19) Fear Scale and an Attitude Scale for the Nursing Profession were used to collect research data. It was found that the nursing students included in the study had mean scores of 161.49±19.54 on the Attitude Scale for the Nursing Profession (ASNP) and 17.50±5.87 on the COVID-19 fear scale, and that there was a significant positive correlation between the two scores. The means scores on the ASNP and COVID-19 Fear Scale of female students and of students who experienced fear during the pandemic were significantly higher than those of other students (p<0.05). It was also determined that the attitude scores of students who had chosen the nursing department willingly were significantly higher than those of other students (p<0.05).

KEYWORDS: Covid-19, Covid-19 fear, attitude to the profession, nursing student, nurse.

#### Introduction

In December 2019, a new type of coronavirus illness which was given the name of COVID-19 was determined to have caused an epidemic in Wuhan in China [1].

The WHO reported that by 18 March 2020 more than 8000 deaths had occurred in 159 countries, and declared COVID-19 a pandemic [2].

The first cases were in Turkey were announced on 10 March 2020, and at the time of writing the total number of cases was approximately 5 million, with 38 500 having lost their lives [3].

COVID-19 has had significant effects at a national and international level [4].

At an individual level, it has triggered feelings of helplessness, illness and death [5].

Its extremely high infection rate and relatively high death rate has naturally caused concern in individuals [6].

In one study, fear of contact with people who had possibly caught COVID-19 was reported

Generally, fear is a primitive emotion, experienced in response to a real or perceived threat.

This emotion is for the present time, because it includes producing a response to the thing which is believed to be a threat.

When fear is felt, certain physiological indications such as an increase in the pulse rate and breathing rate and a tautening of the muscles prepare the body to respond to the danger. Fear also causes changes in the cognitive system such as in attention levels [8].

On the other hand, a high level of fear may cause individuals not to think clearly or rationally when responding to COVID-19 [6].

Fear is directly related to the disease and death rate as well as to the transmission rate and the environment.

This in turn gives rise to other psychosocial problems such as stigmatization, discrimination

For this reason, it may be thought that fear of COVID-19 has the potential individuals' levels of positivity [5].

Nursing is the biggest professional group which has a significant potential power to affect the quality of health services [10].

Nurses work on the front line of the health system, and play in important role in its ability to give good quality patient care with the service that they provide [11].

Nurses play a key role in the presentation of care services, and the quality of this care depends on nurses' training, skills, attitudes and beliefs [12].

Nurses provide care in a holistic way for healthy and sick individuals of any age and cultural background according to their physical, emotional, psychological, intellectual, social and spiritual needs [13].

There are various processes which develop the professional values, attitudes, personal characteristics and professional behaviors of nursing.

Nursing students, who are new members of the profession, have values, beliefs and attitudes which shape their behaviors in their personal and professional relationships [14].

Like everyone, nursing students develop an attitude to their profession, and these attitudes are related to their actions.

Nurses' attitudes in different situations may sometimes be positive or sometimes be negative, showing constant variation [15].

These constantly changing professional attitudes are the most significant sign of professional success [16,17].

Professional attitudes and values in nursing provide a basis for nursing practice, and form a guide to the interaction between the individuals to whom nurses provide care, society and their colleagues [18].

Determining the attitudes of first year nursing students to their profession will allow the behaviors which they will show in this field to be predicted.

Measuring students' attitudes to their profession and acting according to the results obtained will contribute to the quality of health services.

In order to develop the nursing profession, there is a need for members of the profession who love and have mastered the profession, and who carry out professional care in a qualified and responsible way.

It has been said that this need will be met by the university students who will become nurses [19].

With the COVID-19 pandemic, health institutions as well as the academic activities of institutes of higher education have been affected.

This, along with fear of the pandemic, may have caused a change in the perceptions of nursing department students, who are future members of the nursing profession.

Also, the worry and fear caused by the pandemic may be among variables which lead to changes in students' attitudes to the profession.

With this in mind, the aim of this study was to determine the fear of COVID-19 of first year nursing students, who are taking their first steps in the nursing profession, and their attitudes to the profession, and to examine the correlation between them.

It is thought that the findings obtained from this study will make a contribution to the literature, and by determining the factors affecting nursing students' professional attitudes, will be important in providing an opportunity to intervene in this when necessary.

#### **Material and Methods**

The population of this descriptive and crosssectional study was the 175 first year students of the Nursing Department of the Health Sciences Faculty of Bursa Uludağ University in April and May 2021.

The study sample consisted of 156 first year nursing students who were contacted and who were attending classes during the time when the study was conducted, and who participated voluntarily in the research (89.14% participation).

Selection of the students to be included in the study was performed using a simple random sampling method.

A Student Description Form, a Coronavirus (COVID-19) Fear Scale and an Attitude Scale for the Nursing Profession (ASNP) were used to collect research data.

### **Student Description Form**

This form contained nine questions on the students' age, gender, place of residence, way of choosing the nursing department, and, concerning the COVID-19 pandemic, whether they were affected, their source of knowledge and their fear of the pandemic.

# Attitude Scale for the Nursing Profession (ASNP)

This scale was developed and tested for validity and reliability in Turkish by İpek Çoban and Kaşıkçı [20].

It consists of the subdimensions of Characteristics of the Nursing Profession, Choice of the Nursing Profession and Attitude to the Nursing Profession in General, with a total of 40 questions.

Each statement on the Likert type scale is scored from 1 to 5. A high score on the scale indicates a positive attitude to the nursing profession.

The lowest possible score on the scale is 40, and the highest is 200.

A person with a total score of more than 120 can be said to have a positive attitude.

The Cronbch alpha coefficient of the scale was found to be 0.91 [21].

In the present study, the Cronbach alpha coefficient was calculated as 0.93.

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## Coronavirus (COVID-19) Fear Scale

The Coronavirus (COVID-19) Fear Scale was developed by Ahorsu et al. [6], and Turkish validity and reliability were tested by Bakioğlu et al. [5].

The scale has a single dimension, consisting of seven items, evaluated according to a five-point Likert-type system.

The total score obtained from all the items on the scale reflects the level of fear of Coronavirus (COVID-19) which an individual experiences.

Possible scores range from 7 to 35. A high score on the scale indicates a high level of fear of Coronavirus.

The Cronbach alpha internal consistency coefficient of the scale was found to be 0.88 [5], and in the present study, the scale total item internal consistency coefficient was calculated as 0.86.

### **Ethical Implementations**

The necessary legal permission to conduct the research was obtained from the authors who carried out the Turkish validity and reliability testing of the scales used in the study, and from Bursa Uludağ University Ethics Committee (Date: 31 March 2021, Decision No. 2021-02).

The aim of the research was explained to the students, and informed consent was obtained from those who wished to take part voluntarily in the study.

It was explained to the students that the data would be used entirely for the scientific study, and that their responses would in no way affect their grades.

The forms were sent to the students online, and those which were completed without omission were taken for evaluation.

#### Statistical Analysis

Data evaluation was performed with the package SPSS 22.0. Numbers, percentages and means were calculated in the analysis of data.

The Mann-Whitney U test and Spearman correlation analysis were used in the data analysis

The level of significance considered through the analysis was p<0.05.

#### Results

It was found that the mean age of the students participating in the study was 19.60±2.22 years, a majority were female (75.6%), 98.7% lived with their families, and 75% had chosen the nursing department willingly.

According to their statements, 89.7% of them had had to stay away from school and 82% from entertainment and social life in the pandemic, 91.6% obtained information on COVID-19 from the television, and 85.9% had experienced fear during the outbreak (Table 1).

Table 1. Distribution of students' descriptive characteristics.

Variables	Number	Percentage				
	(n)	(%)				
Gender						
Female	118	75.6				
Male	38	24.4				
Mean Age: 19.60±2.22 years						
Place of Residence	,					
With family	154	98.7				
With friends or relatives	2	1.3				
Willing Choice of the Nursin	g Departm	ent				
Yes	117	75.0				
No	39	25.0				
Effects of the COVID-19 Ou	tbreak*					
I see my friends less	78	50.0				
I'm away from my family	51	32.6				
I'm separated from fun and social life	128	82.0				
I'm alone	22	14.1				
I'm away from my school	140	89.7				
I've changed the place I live	3	1.9				
I'm not affected	2	1.2				
Source of Information on CO	OVID-19 O	utbreak*				
Ministry and Official Institutions	77	49.3				
TV	143	91.6				
Social Media	118	75.6				
Scientific Research Results	36	23.7				
Social Circle	65	41.6				
Fear Experienced during the COVID-19 Outbreak						
Yes	134	85.9				
No	22	14.1				

Note: \*Participants gave more than one response.

The students' mean total score on the ASNP was found to be 161.49±19.54, and it was seen that the students' attitude to their profession was positive.

The students' mean scores on the subdimensions of the ASNP were calculated as 77.92±9.87 for Characteristics of the Nursing Profession, 49.73±8.70 for Choice of the Nursing Profession and 33.82±3.69 for Attitude to the Nursing Profession in General (Table 2).

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Table 2. Students' mean scores on ASNP and subdimensions.

ASNP and Subdimensions	Mean ± SD	Min-Max Score
Characteristics of the Nursing Profession	77.92±9.87	29-90
Choice of the Nursing Profession	49.73±8.70	18-65
Attitude to the Nursing Profession in General	33.82±3.69	20-41
Total ASNP	161.49±19.54	91-192

Note: SD: Standard Deviation

The students' mean total score on the COVID-19 Fear Scale was found to be 17.50±5.87 (min: 7, max: 32).

From this finding, it was seen that the students' COVID-19 Fear Scale score was at a medium level.

When the correlation distribution between the COVID-19 Fear Scale and the ASNP was examined, it was seen that there was a significant positive correlation between the subdimension of Characteristics of the Nursing Profession and total ASNP, and the COVID-19 Fear Scale (Table 3).

Table 3. Distribution of correlation between Covid-19 Fear Scale and ASNP scores.

	Characteristics of the	Choice of the Nursing	Attitude to the Nursing	Total
Covid-19	Nursing Profession	Profession	Profession in General	ASNP
Fear Scale	r: 0.220	r: 0.141	r: 0.094	r: 0.205
	p: 0.006	p: 0.079	p: 0.241	p: 0.010

Note: r: Spearman Correlation Coefficient

Table 4 shows findings concerning the mean scores on the COVID-19 Fear Scale and the ASNP in relation to various characteristics of the first year nursing students who participated in the research.

According to the statistical analysis, female students had significantly higher mean scores than males in the subdimensions of Characteristics of the Nursing Profession and Choice of the Nursing Profession, and in the total mean scores of ASNP and the COVID-19 Fear Scale.

It was found that the total and subdimension ASNP mean scores of students who had chosen the nursing department willingly and the total and subdimension ASNP mean scores and COVID-19 Fear Scale mean scores of students who experienced fear during the pandemic were significantly higher than those of other students (p<0.05, Table 4).

On the other hand, it was seen that the variable of student's place of residence did not affect their mean ASNP and COVID-19 Fear Scale scores (p>0.05, Table 4).

Table 4. Distribution of students' mean scores on the Covid-19 Fear Scale and the ASNP according to certain independent variables.

Variables	Characteristics of the Nursing Profession	Choice of the Nursing Profession	Attitude to the Nursing Profession in General	Total ASNP	Covid-19 Fear Scale
Gender	Troicssion	Trocsson	in General		
Female	79.43±9.00	50.72±8.67	34.00±3.78	164.16±18.93	18.67±5.70
Male	73.26±11.07	46.65±8.16	33.28±3.38	153.21±19.30	13.84±4.83
Statistical Analysis	Z: -3.637	Z: -3.231	Z: -1.269	Z: -3.746	Z: -4.467
,	p: 0.000	p: 0.001	p: 0.205	p: 0.000	p: 0.000
Place of Residence		•		•	•
With family	78.16±9.06	49.72±8.70	33.91±3.54	161.81±18.74	17.52±5.82
With friends or relatives	59.50±43.13	50.50±12.02	27.00±9.89	137.00±65.05	15.50±12.02
Statistical Analysis	Z: -0.055	Z: -0.126	Z: -1.323	Z: -0.213	Z: -0.316
	p: 0.956	p: 0.900	p: 0.186	p: 0.832	p: 0.752
Willing Choice of Nursing					
<u>Department</u>					
Yes	79.28±9.58	51.99±7.07	34.31±3.37	165.58±17.38	17.69±5.61
No	73.87±9.74	42.97±9.67	32.35±4.22	149.20±20.71	16.92±6.62
Statistical Analysis	Z: -3.400	Z: -5.235	Z: -2.713	Z: -4.661	Z: -0.789
	p: 0.001	p: 0.000	p: 0.007	p: 0.000	p: 0.430
Fear during the Covid-19 outbreak					
Yes	78.79±9.04	50.60±7.80	34.14±3.48	163.54±17.81	24.86±5.30
No	72.63±12.91	44.45±11.78	31.90±4.38	149.00±24.86	17.81±1.53
Statistical Analysis	Z: -2.561	Z: -2.791	Z: -2.399	Z: -3.112	Z: -5.376
	p: 0.010	p: 0.005	p: 0.016	p: 0.002	p: 0.000

Note: Z; Mann-Whitney U Test

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#### Discussion

This research was conducted with the aim of investigating the relationship between fear of COVID-19 and attitudes to the profession of first year nursing students, who are taking their first steps in the nursing profession. It was found in the results of the study that the students' total mean score on the ASNP was 161.49±19.54.

Considering that a person whose total score on the scale is over 120 has a positive attitude to the nursing profession, the fact that the first year nurses who participated in the study had a positive attitude to the profession during the pandemic is a pleasing finding.

In a study performed by Turan et al. [17] during the pandemic, the total ASNP score of nursing students was found to be 162±15.6, and it was determined that their attitude to the profession was positive. Although only first year nursing students were included in our study, it is seen that the results of the two studies are similar. Also, according to the results of another study in the literature, the attitude of nursing students to their profession was positive [21-24].

Even though the measuring instruments were different, it was seen that the results of this study were similar to ours.

It was found that nursing students who were female and those who had chosen the nursing department willingly had significantly more positive attitudes to their profession than the other students. In the results of a study by Gol using the same measurement instrument, it was found that students who were female and those who had chosen the nursing profession voluntarily had significantly more positive attitudes to their profession [21].

In one study also, the correlation between nursing students' choice of profession and professional attitude was investigated, and attitudes to the profession were found to be more positive in those who had chosen the profession willingly [25].

Turan et al. arrived at similar conclusions to ours in a study conducted during the pandemic [17].

The conclusions of our study are similar to the literature. The fact that the majority of students were female and the result that students who had chosen their profession willingly had positive attitudes to their profession were expected findings. On the other hand, it was found that students who lived with their families had a higher opinion of their profession than other students, although this was not significant. This result was interpreted as showing that the family factor might affect students' professional choice. With the very high infection rate and the relatively high death rate in the pandemic, it is natural that people began to be afraid of COVID-19. It was reported that this fear was mostly a fear of contact with people who might have caught COVID-19 [7].

Unfortunately, fear can increase the damage caused by the illness [6,26,27].

The COVID-19 outbreak, as well as threatening physical health and lives, has contributed to an increase in stress levels, and many different kinds of psychological problems such as anxiety and depression [4].

In addition to a rapid increase in the number of patients, health professionals have been faced with a greater work load and a higher risk of infection, which could lead to mental health problems [27,28].

This affected and continues to affect nurses in Turkey, as in the whole world. One of the groups most affected by the pandemic is certainly first year students who are taking their first steps in the profession which they have chosen. In this study, the students' total mean score on the COVID-19 Fear Scale was found to be 17.50±5.87.

Considering that the highest possible score on the scale is 35, it can be said that the students' fear levels were moderate.

Although most of the students (85.9%) stated that they experienced fear in the pandemic, this medium-level score is cause for thought, and was interpreted as the students feeling fear in different ways. On the other hand, it was determined that students who stated that they experienced fear during the COVID-19 outbreak had significantly higher mean scores on the COVID-19 Fear Scale than the other students.

This was evaluated as an expected result. At the time of the COVID-19 outbreak, the educational process of institutes of higher education were affected, and therefore first-year nursing students may have experienced fear because of the responsibilities which the profession which they had chosen involved.

In the results of this study, a significant positive correlation was found between the total scores of the COVID-19 Fear Scale and the ASNP.

That is, it was seen that as the levels of the students' fear of COVID-19 rose, their opinion of their profession also rose. With this result, it may be that although nurses are at great risk, working on the front line to improve the health

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of patients in the COVID-19 pandemic has a positive effect on the image of nursing, and in this way, the students' opinion of their profession may have improved.

It was found in the results of a study by Turan et al. conducted to analyze the anxiety levels and attitudes concerning the nursing profession of nursing students during the COVID-19 outbreak that the attitude to the nursing profession became more negative with anxiety [17].

This was interpreted as the students' attitudes to their profession being negatively affected because the COVID-19 risk is greater in health workers than in others. The results of this study are dissimilar from our study results, and it is thought that this may stem from a difference in some variables. In our study, we determined not anxiety levels but levels of fear in the students. In the literature, the emotion which is felt in response to a real, life-threatening danger is called fear, and the state of discomfort or unease of a person when there is no concrete danger is called anxiety [29].

Thus, although fear and anxiety are similar in some respects, certain points distinguish them. Also, the inclusion in our study sample of only first year students constitutes another difference for this study. It was found that the mean score on the COVID-19 Fear Scale of the female students included in the study was significantly higher than that of the male students. Conclusions have been reported in the literature that fear of COVID-19 has a greater psychological effect on females [5,30].

Although the results of our study are in accordance with the literature, the fact that most of the students participating in our study were female is assumed to have affected this result.

Also, it was found that students living with their families had a higher mean score on the COVID-19 Fear Scale, although this was not significant. It is thought that this result may have arisen from the fear created in students of the possibility of exposure to the virus of family members during the pandemic.

In a study by Turan et al., it was asserted that the anxiety levels of students who chose the nursing profession unwillingly were significantly higher [17].

It was stated that this may have been caused by the unwilling choice of profession leading to low job satisfaction and negative perceptions of the work environment. In our study, it was concluded that there was no significant correlation between the way the nursing profession was chosen and the COVID-19 Fear Scale

This suggests that this difference between the results of the studies may have arisen from variables such as the study sample, the measurement instruments and determining the level of fear rather than anxiety.

#### Conclusions

It was seen in the conclusion of this study that in the pandemic, first year nursing students' attitudes to their profession was positive, their fear of the COVID-19 pandemic was medium, and that there was a positive correlation between attitude to the profession and fear of the pandemic.

Also, it was found that the attitudes to the profession of students who had chosen the nursing department voluntarily was more positive, but that variables such as gender and feeling worry during the outbreak also affected the students' attitudes to their profession and their fear of the COVID-19 pandemic.

Among the recommendations in the light of these conclusions are for teaching staff to provide encouragement to students in order to raise their opinions of the profession and to plan lessons or activities to increase awareness, and to plan education to reduce fear of the COVID-19 pandemic.

In addition, it is recommended that the research should be repeated with a wider sample including students of upper classes.

#### **Limitations of the Research**

Among the limitations of this study are that it was conducted in a single center, that data was collected within a certain time interval, and that the answers to the questionnaire depended on the students' own statements.

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#### **Conflict of interests**

None to declare.

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Corresponding Author: Dilek Yilmaz, Department of Nursing, Bursa Uludağ University, Bursa, Turkey, e-mail: dilekk@uludag.edu.tr

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