#### ORIGINAL ARTICLE

# Analysis of anxiety levels and attitudes of nursing students toward the nursing profession during the COVID-19 pandemic

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## Abstract

**Purpose:** This study was conducted to analyze the anxiety levels and attitudes of nursing students for the nursing profession during the COVID-19 pandemic.

**Methods:** Data collection forms were sent online to nursing students of three different state or foundation universities in Turkey. In all, 456 individuals who answered the data collection forms were included in the study.

**Findings:** Study results revealed that the total average score for the "Attitude Scale for Nursing Profession" was  $162 \pm 15.6$ . The *Professional characteristics* subdimension score average was  $80.64 \pm 7.02$ . Furthermore, the *state of choosing nursing profession* subdimension score average was  $50.05 \pm 9.23$ , whereas the *Attitude for the general status of nursing profession* subdimension score average was  $34.38 \pm 2.97$ . Due to the pandemic, anxiety levels for the nursing profession were  $4.86 \pm 2.76$  (between 0 and 10). It was determined that nursing students who studied in cities where the virus was very common had a more positive attitude toward the profession. Anxiety levels of nursing students studying in cities where the virus impact was moderate and in cities where the virus presence was quite common were higher (p > 0.05). **Practical Implications:** It was found that nursing students had a positive and high-level attitude toward the nursing profession. Furthermore, the results demonstrated that attitudes toward the nursing profession decreased significantly as anxiety increased.

#### KEYWORDS

anxiety, attitude for profession, COVID-19, nursing student, pandemic

# 1 | INTRODUCTION

One of the disasters faced by humanity is undoubtedly epidemic diseases, and they have deeply affected humans and paralyzed social life throughout history.<sup>1</sup> The COVID-19 epidemic, which emerged in the Wuhan city of China, affected the whole world by spreading quickly and by having a significant effect on societies worldwide.<sup>2</sup> COVID-19 is the first pandemic caused by coronaviruses, which spread quickly to hundreds of countries worldwide.<sup>3</sup> A large number of studies have demonstrated that epidemic diseases, such as COVID-19, create considerable trauma in people and increase anxiety levels.<sup>4–7</sup>

Anxiety is defined as an unpleasant mood consisting of tension, worry, and physiological arousal that occurs due to various reasons in the individual.<sup>8-10</sup> It consists of emotions such as uneasiness, worry, doubt, and fear in the individual.<sup>11,12</sup> The increase in anxiety decreases faith and the strength to struggle.<sup>13,14</sup> In addition, anxiety II. F.Y-Perspectives in PSYCHIATRIC CARE

that occurs as a result of the pandemic affects nursing students who are just beginning their professional life and who have to care for patients diagnosed with COVID-19 negatively in several ways. The most important of these are the attitudes of nursing students toward the nursing profession.<sup>15</sup> Attitude can be defined as a psychological structure that cannot be directly observed and that can be associated with things felt and beliefs and acts for an object, state, or individual, and it can vary from individual to individual. Attitude has three important characteristics: namely, it is learned; it can be associated with acts, and it is a two-pole (positive-negative) continuous variable.<sup>16</sup> Strong professional identities and attitudes of the members of a vocation are important for an occupation to reach specialist status and to provide quality service to society. With the establishment of professional attitude for the profession among nurses, positive effects are expected, such as an increase in the quality of healthcare services and ensuring professional unity and status.<sup>17</sup>

Nursing is a health discipline consisting of both science and art, and it is responsible for the planning, organization, implementation, and evaluation of nursing services for protecting and developing the health and well-being of the individual, family, and society, as well as improving health and well-being in the case of illness and training the individuals who will perform these services.<sup>18</sup> The nursing profession has different processes that develop values, attitudes, personal characteristics, and professional behaviors. Nursing students, who are new members of the profession, have values, beliefs, and attitudes that shape their behaviors in their personal and professional relationships.<sup>19</sup> For the nursing profession to reach a more professional level, nursing schools need students who are suitable for the characteristics of the profession and who have positive attitudes for the nursing profession.<sup>20</sup>

Like all individuals, nursing students pick up attitudes toward the profession and associate these attitudes with actions. The attitudes of nurses in different situations can be sometimes positive and sometimes negative and thus vary constantly.<sup>19,20</sup> These professional attitudes, which vary all the time, are the most crucial indicators of professional success.<sup>17</sup> During the pandemic, the positive attitudes of nursing students who have just started the profession will also have a positive effect on factors regarding the profession. Determining the attitudes of nursing students for their profession and their levels of anxiety during this process will help in predicting the behaviors they will demonstrate in these areas. Measuring nursing students' attitudes toward the profession and their anxiety levels and taking measures for the results obtained can contribute to increasing the quality of health services. The aim of this study is to examine nursing students' attitudes toward the profession and their anxiety levels during the COVID-19 pandemic.

# 2 | MATERIALS AND METHODS

#### 2.1 | Type of the study

## 2.2 | Population and sample of the study

The data for the study were collected in the nursing departments in a state university in Elazığ, a state university in Konya, and a foundation university in Istanbul between May 1 and 10, 2020. Nursing students studying in these cities were chosen since there were high numbers of COVID-19 cases in istanbul (12.231 people), moderate numbers in Konya (601 people), and low numbers in Elazığ (12 people).<sup>21</sup> The population of the study consisted of nursing students in the health science faculties where the study was conducted (Elazığ 640, Konya 459, istanbul 180). Using power analysis, the sample size was determined to be n = 400, with an effect size of 0.40, a power of 99%, and a margin of error of 0.05. Furthermore, 510 nursing students were reached between the specified dates. Fifty-four of the students did not want to participate in the research. The study was completed with 456 students, as sufficient sample size was reached for the power analysis.<sup>22</sup>

The dependent variables of the study were students' attitudes toward the nursing profession and level of anxiety. Independent variables of the study included sociodemographic characteristics.

#### 2.3 | Data collection instruments

The data were collected using Personal Information Form, Anxiety Scale, and Attitude Scale for Nursing Profession (ASNP).

#### 2.4 | Personal Information Form

This form was developed by the researchers based on the literature and included eight questions, such as age, gender, parental educational status, parents' profession, level of education, the school graduated from, the state of choosing to nurse willingly, and anxiety for the profession.

#### 2.5 | Anxiety Scale

Students' anxiety levels were measured with the Anxiety Scale. There is a value of 0 at the beginning and 10 at the end of a 10 mm line. Here, 0 indicates no anxiety and 10 indicates extreme anxiety. Although the student marks the anxiety he/she feels on this line, each point marked by the student is measured in cm. The length of distance from where there is no anxiety to where the student marks is indicated as the student's anxiety.<sup>23</sup>

# 2.6 | Attitude Scale for Nursing Profession

ASNP, developed by Coban and Kasıkçı,<sup>24</sup> was used to determine attitudes for the nursing profession. ASNP was developed with a study conducted using high school students in their last year, first- and fourthyear nursing students, health clinic nurses, and patients to determine attitudes for the nursing profession. The scale has 40 Likert-type items (regarding positive and negative attitudes), with responses scored on a scale ranging from 1 to 5 (1 = totally disagree and 5 = totally agree). ASNP (40–200 score) includes three subdimensions: namely, characteristics of the nursing profession (18–90 score), the state of choosing the nursing profession (13–65 score), and attitude for the general status of the nursing profession (9–45 score). As the score taken from the scale increases, the positive attitude toward the nursing profession also increases.<sup>24</sup> The Cronbach's alpha coefficient of the scale is 0.91. In the present study, Cronbach's alpha coefficient was 0.90.

### 2.7 | Data collection

The data collection forms prepared in the GoogleDocs program were sent online (through e-mail or WhatsApp) to the nursing students of three universities between May 1 and 10, 2020. Furthermore, 510 nursing students were reached between the specified dates. Fiftyfour of the students did not want to participate in the research, and the survey was completed with 456 students (89% completed).

#### 2.8 | Data assessment

The SPSS version 22.00 statistical package program was used for the data analysis. Percentage, average, and standard deviation were used as descriptive statistics. Normality distribution of numerical variables was evaluated with Skewness and Kurtosis. According to Skewness and Kurtosis values, parametric tests were used in the analysis of data that had normal distribution (between -2 and +2), while non-parametric tests were used in the analysis of data that did not have a normal distribution. Mann-Whitney *U* test was used for the comparison of scale scores for two groups, while the Kruskal-Wallis test was used for the comparison of scale scores for more than two groups. Spearman's correlation analyses were used as analytical statistics. The level of significance was p < 0.05.

# 2.9 | Ethical aspect of the study

Before starting the study, approval was acquired from Istanbul Sabahattin Zaim University Ethics Committee (2020/04 numbered). In the digital environment, consent was obtained from the students by sending the form, including necessary explanations about the aim and implementation method of the study online to students included in the study. The study was conducted in accordance with the Declaration of Helsinki.

## 2.10 | Limitations of the study

The most important limitation of the study included the fact that it was conducted in three cities.

#### 3 | RESULTS

Table 1 depicts the sociodemographic characteristics of nursing students who agreed to participate in the study and their information regarding COVID-19. The average age of the students was  $21.09 \pm 2.41$ , and 42.1% of them studied at the university in Elazığ. Results revealed that 80.3% of the students were female, 23.7% were fourth-year students, and 71.3% chose the profession willingly. It was found that 24.1% of the students knew someone who cared for COVID-19 patients. In addition, 88.6% of the students did not consider quitting the nursing profession, 84.6% thought that the nursing profession had become more risky, and anxiety symptoms attributed to the COVID-19 pandemic were reported in 43.2% of the participants.

Table 2 shows measurement scores of ASNP and its subdimensions. Although the *Characteristics of the nursing profession* subdimension score average was  $80.64 \pm 7.02$ , the *State of choosing nursing profession* subdimension score average was  $50.05 \pm 9.23$ .

TABLE 1	Sociodemographic	characteristics	and	information
about COVIE	D-19 (n = 456)			

	Avg ± SD			
Age		21.09± %	± 2.41	
School	İstanbul	162	35.5	
	Elazığ	192	42.1	
	Konya	102	22.4	
Gender	Female	366	80.3	
	Male	90	19.7	
Year of study	1st year	110	24.1	
	2nd year	131	28.7	
	3rd year	107	23.5	
	4th year	108	23.7	
The state of choosing the profession	Yes	325	71.3	
willingly	No	131	28.7	
Knowing someone caring for COVID-	Yes	110	24.1	
19 diagnosed patients	No	346	75.9	
The state of thinking of changing the	Yes	22	4.8	
profession of nursing due to pandemic	No	404	88.6	
F	Indecisive	30	6.6	
The state of finding the profession of	Yes	388	84.6	
nursing risky due to pandemic	No	54	11.8	
	Indecisive	16	3.5	
The state of having anxiety for the	Yes	197	43.2	
profession of nursing due to pandemic	No	184	40.4	
paraerine	Indecisive	75	16.4	

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**TABLE 2** Measurement averages of ASNP and subdimensions

	Avg ± SD
Characteristics of the nursing profession	80.64 ± 7.02
State of choosing nursing profession	50.05 ± 9.23
Attitude for the general status of nursing profession	34.38 ± 2.97
ASNP	162 ± 15.6
Anxiety Scale for Nursing Profession due to pandemic	4.86 ± 2.76

Abbreviation: ASNP, Attitude Scale for Nursing Profession.

Furthermore, the Attitude for the general status of nursing profession subdimension score average was  $34.38 \pm 2.97$ , and the ASNP total score average was  $162 \pm 15.6$ . Anxiety levels for the nursing profession due to the pandemic were  $4.86 \pm 2.76$  (between 0 and 10).

Table 3 depicts the comparison of sociodemographic characteristics and information regarding COVID-19 with ASNP and its subdimensions. Females, third-year students, and students who willingly chose the nursing profession were significantly more likely to have higher scores on the characteristics of the nursing profession subdimension of the ASNP scale compared to males, students at other levels of training, and students who did not willingly choose the nursing profession. Students who willingly chose the nursing profession, those who did not think of changing nursing profession due to pandemic, and those who did not have anxiety for the profession were significantly more likely to have higher scores on the state of choosing nursing profession subdimension of the ASNP scale compared to students who did not willingly choose the nursing profession, those who did think of changing nursing profession due to pandemic, and those who did have anxiety for the profession. Third-year students and students who chose the nursing profession willingly were significantly more likely to have higher scores on the attitude for the general status of nursing profession subdimension of the ASNP scale compared to students at other levels of training and students who did not willingly choose the nursing profession. Females, third-year students, students who chose the nursing profession willingly, those who did not think of changing nursing profession due to the pandemic, and those who did not have anxiety for the profession were significantly more likely to have higher scores on the ASNP scale compared to males, students at other levels of training, students who did not willingly choose the nursing profession, those who did think of changing nursing profession due to the pandemic, and those who did have anxiety for the profession (Table 3, p < 0.05).

Students who did not willingly choose the nursing profession, those who think of changing nursing profession due to the pandemic, those who find the profession of nursing as risky due to the pandemic, and those who have anxiety for the profession were significantly more likely to have higher scores on the anxiety scale compared to students who willingly chose the nursing profession, those who did not think of changing nursing profession due to the pandemic, those who did not find the profession of nursing risky due to the pandemic, and those who did not have anxiety for the profession (Table 3, p < 0.05).

A positive and weak significant association was found between age and the *Characteristics of the nursing profession* subdimension. A negative and weak significant association was found between the anxiety scale and the *State of choosing nursing profession* subdimension. A negative and weak significant association was found between the anxiety scale and ASNP (Table 4; p < 0.01).

## 4 | DISCUSSION

Today, nursing is accepted as a vital factor within the healthcare system in the world, including in Turkey.<sup>25</sup> In addition, nursing has serious responsibilities, such as protecting and developing health and improving health in the case of illness. In this regard, nurses who have great responsibilities during the pandemic face high risks of infection while combating the epidemic and coping with intense working conditions, working with insufficient rest and resources, and in insecure conditions experience severe anxiety and mental affection.<sup>26</sup> When all these are taken into consideration, attitudes of nursing students, who are nurses of the future, for the profession of nursing will be affected either positively or negatively.

In the study, the ASNP total score average was  $162 \pm 15.6$ . The Characteristics of the nursing profession subdimension score average was 80.64 ± 7.02, and the State of choosing nursing profession subdimension score average was 50.05 ± 9.23. Finally, the Attitude for the general status of nursing profession subdimension score average was 34.38 ± 2.97. These results show that nursing students have high positive attitudes for the profession. In a study conducted by Kathari and Sharma<sup>27</sup> with nurses and student nurses, it was found that attitudes of nursing students for the profession were 155 ± 11.84. In studies by Miligi and Selim<sup>28</sup> and Mai et al.,<sup>29</sup> attitudes of nursing students for the profession were found to be positive at  $150.48 \pm 17.86$  and  $148.76 \pm 37.29$ , respectively. Different studies conducted have demonstrated that nursing students had positive attitudes for the profession.<sup>30,31</sup> Although the results of the study are similar to the results of studies conducted in the literature, higher scores are expected for the pandemic process. The higher the rate of benefits provided by a profession to the society, the higher the status of the profession. Therefore, this situation positively affects the personality of members of the profession providing service to society.<sup>32</sup> In line with this result, highly positive attitudes of nursing students for the profession during COVID-19 could be explained by the fact that the image of nurses is positively affected during this process because they struggle on the front line although they are under the greatest risk during this process.

When the attitudes of nursing students for the profession were analyzed in terms of the university they were studying at, it was found that nursing students studying in the city in which the virus was very common had higher ASNP scores and all subdimensions, whereas there was no significant association between them.

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		Characteristics of profession	of the nursing	State of choosing nursing profession	ng nursing	Attitude for the general status of nursing profession	eral ofession	ASNP	Anxiety measurement	rement
		Avg ± SD	d	Avg ± SD	d	Avg±SD	d	Avg±SD p		
University	istanbul	$4.5 \pm 0.38$	0.871*	$3.95 \pm 0.61$	0.134*	$3.81 \pm 0.3$	0.389*	$4.09 \pm 0.34$ $0.541^{*}$	4.9±2.52	0.965*
	Elazığ	4.46 ± 0.42		3.79 ± 0.76		$3.81 \pm 0.37$		4.02 ± 0.43	4.78 ± 2.91	
	Konya	$4.49 \pm 0.34$		3.78 ± 0.73		$3.86 \pm 0.29$		$4.05 \pm 0.37$	4.93 ± 2.84	
Gender	Female	$4.5 \pm 0.37$	0.048**	3.88 ± 0.69	0.055**	$3.83 \pm 0.31$	0.083**	4.07 ± 0.37 0.017**	4.95 ± 2.7	0.160**
	Male	4.4 ± 0.45		$3.71 \pm 0.75$		3.76±0.38		3.96 ± 0.43	4.48 ± 2.96	
Year of study	1st year	$4.35 \pm 0.41$	0.001*	3.7 ± 0.74	0.107*	$3.72 \pm 0.37$	0.001*	3.92 ± 0.42 <b>0.002</b> *	4.45 ± 2.51	0.208*
	2nd year	$4.5 \pm 0.41$		$3.91 \pm 0.71$		$3.88 \pm 0.31$		$4.1 \pm 0.38$	4.82 ± 2.7	
	3rd year	$4.58 \pm 0.34$		3.92 ± 0.65		$3.84 \pm 0.31$		$4.12 \pm 0.35$	4.95 ± 2.76	
	4th year	$4.49 \pm 0.37$		$3.84 \pm 0.7$		$3.82 \pm 0.31$		$4.05 \pm 0.37$	5.22 ± 3.03	
The state of choosing the	Yes	$4.52 \pm 0.37$	0.001**	4.08 ± 0.57	0.001**	$3.86 \pm 0.31$	0.001**	$4.16 \pm 0.33$ 0.001**	4.66 ± 2.64	0.031**
profession willingly	No	$4.38 \pm 0.42$		3.26 ± 0.67		3.72 ± 0.35		$3.79 \pm 0.39$	5.33 ± 2.97	
Knowing someone caring for	Yes	$4.49 \pm 0.39$	0.843**	$3.84 \pm 0.7$	0.907**	$3.8 \pm 0.31$	0.673**	$4.04 \pm 0.37$ 0.725**	5.15 ± 2.79	0.309**
COVID-19 diagnosed patients	No	$4.48 \pm 0.39$		$3.85 \pm 0.71$		$3.83 \pm 0.34$		$4.05 \pm 0.39$	4.76 ± 2.74	
The state of thinking of changing	Yes	4.36 ± 0.49	0.424*	$2.84 \pm 0.73$	0.001*	3.78 ± 0.36	0.969*	$3.66 \pm 0.41$ 0.001*	8.86 ± 1.36	0.001*
the profession of nursing due to pandemic	No	$4.48 \pm 0.39$		3.93 ± 0.66		$3.82 \pm 0.33$		$4.08 \pm 0.38$	4.47 ± 2.63	
	Indecisive	$4.54 \pm 0.35$		$3.44 \pm 0.59$		3.83±0.29		3.94 ± 0.34	$7.1 \pm 1.47$	
The state of finding the profession Yes	Yes	$4.49 \pm 0.38$	0.072*	$3.82 \pm 0.72$	0.298*	$3.81 \pm 0.32$	0.766*	$4.04 \pm 0.39$ 0.354**	5.24 ± 2.66	0.001**
of nursing as risky due to pandemic	No	4.47 ± 0.46		4.01±0.6		3.84 ± 0.37		$4.11 \pm 0.39$	2.44 ± 2.23	
	Indecisive	4.3 ± 0.34		3.87±0.59		3.88±0.34		$4.01 \pm 0.33$	3.75 ± 2.18	
The state of having anxiety for the	Yes	$4.48 \pm 0.38$	0.943*	$3.61 \pm 0.74$	0.001*	$3.8 \pm 0.31$	0.721**	3.97 ± 0.39 <b>0.001</b> *	6.92 ± 1.9	0.001*
profession of nursing due to pandemic	No	4.47 ± 0.41		4.05 ± 0.6		3.83±0.34		$4.12 \pm 0.37$	2.58 ± 2.06	
	Indecisive	$4.5 \pm 0.38$		3.97 ± 0.69		$3.84 \pm 0.35$		$4.1 \pm 0.4$	5 ± 1.53	

Comparison of sociodemographic characteristics and information about COVID-19 with ASNP and subdimensions and anxiety **TABLE 3** 

Note: Bold values indicate Attitude Scale for Nursing Profession (ASNP), p < 0.05.

\*Kruskall-Wallis test.

\*\*Mann-Whitney U test.

		Age	Anxiety scale	Characteristics of the nursing profession	State of choosing nursing profession	Attitude for the general status of nursing profession	ASNP
Age	r	1					
	р	•					
Anxiety scale	r	-0.021	1				
	р	0.662					
Characteristics of the nursing	r	0.104	-0.03	1			
profession	р	0.026	0.516				
State of choosing nursing profession	r	0.069	-0.335	0.448	1		
	р	0.144	0.001	0.001			
Attitude for the general status of nursing profession	r	0.034	-0.031	0.576	0.396	1	
	р	0.468	0.509	0.001	0.001		
ASNP	r	0.083	-0.234	0.756	0.880	0.702	1
	р	0.078	0.001	0.001	0.001	0.001	

#### TABLE 4 Comparison of age, anxiety scale, ASNP, and subdimensions

Note: Spearman's correlation. p < 0.05.

Abbreviation: ASNP, Attitude Scale for Nursing Profession.

Moderate levels of anxiety have a stimulating, protective, and motivating effect on the organism. When anxiety is managed well, it encourages the individual to strive to be more successful and to take measures against negative experiences.<sup>33,34</sup> In the present study, the fact that nursing students studying in the city where the virus was quite common had moderate levels of anxiety could have led to nursing students developing more positive attitudes for the profession.

In the present study, it was found that female nursing students had higher ASNP and *Characteristics of the nursing profession* subdimension score averages when compared with male students. In a study conducted by Gol<sup>31</sup> on nursing students, it was found that women demonstrated more positive attitudes when compared to men. The results of the study are in parallel with the literature. The fact that most of the nurses were women could have influenced this result. In addition, news reports have suggested that men had weaker immune system and that they are taking more responsibility, and being more under pressure would cause them to be more affected by the pandemic.<sup>37</sup> This situation can cause male nursing students to have lower positive attitudes for the profession.

In the study, third-year students were found to have significantly higher ASNP, *Characteristics of the nursing profession*, and *Attitude for the general status of nursing profession* subdimension scores. Unlike the current study, Miligi and Selim<sup>28</sup> found no significant association between academic year and attitude for the profession.<sup>28</sup> This result differs from the literature. Such a difference can be explained by the fact that fourth-year students are about to graduate and that first- and second-year students have less experience when compared with third-year students.

In the study, it was found that the students who chose the profession willingly had significantly higher scores in all ASNP subdimensions. Gol<sup>31</sup> and Zencir<sup>36</sup> also found that the students who chose the profession willingly had more positive attitudes for the profession.<sup>31,36</sup> This result parallels those in the literature. Choosing a profession is crucial in terms of influencing individuals' doing their job with love, loving the institution they work in and their colleagues, and having high levels of professional relationships and job satisfaction, thus perceiving their working environment more positively.<sup>37</sup> In this regard, it is expected that students who choose the profession willingly would have high attitudes for the profession.

In the study, it was found that the students who did not think about changing the profession of nursing and those who did not have anxieties about the profession had higher ASNP and Attitude for the general status of nursing profession subdimension scores (p < 0.05; Table 3). With the declaration of the year 2020 by WHO as "The year of nurses and midwives," the whole world concentrated on the profession of nursing in an unpredictable manner. The profession of nursing has come to the fore, and its value is now being appreciated during the COVID-19 epidemic. In this tragic outbreak, the irreplaceability of nursing practices is being displayed in all areas of the world, and nurses have been declared as heroes.<sup>38</sup> This situation may have decreased students' anxiety for the profession and caused them to develop positive attitudes for it.

In the study, when the anxiety levels of the nursing students were examined in terms of the university they were studying in, the nursing students studying in cities with moderate and high virus levels were found to have higher anxiety levels; however, no significant relationship was found. This result may be because the nursing students studying in these cities had a higher likelihood of encountering patients diagnosed with COVID-19 during this process and providing care to them.

The results of the current study revealed that students who chose their profession unwillingly had significantly higher anxiety levels. Considering that choosing the profession unwillingly leads to individuals lacking the will to fight the difficulties encountered, to having low job satisfaction, and to perceiving their working environment negatively,<sup>34,37</sup> it is expected that such nursing students would have high anxiety levels during the COVID-19 pandemic.

A large number of studies have demonstrated that individuals' anxiety levels increase during epidemics.<sup>4–7</sup> In this study, it was found that the students who thought of changing their nursing profession due to pandemic had higher anxiety levels. The fact that the majority of students who participated in this study were women is thought to have an effect on this result. It is stated in the literature that women have higher anxiety levels than men.<sup>39</sup> Similarly, in a study conducted with nursing students by Sevinc and Özdemir<sup>40</sup> female students were found to have higher anxiety levels. In this study, the anxiety that the individuals felt may have caused them to think about quitting the nursing profession, which has a higher probability of transmission. According to the results of the study, students who wanted to change their profession had lower ASNP and subdimension scores. Based on this, it is possible for individuals with high anxiety levels to want to change their professions. In addition, it was found that the students who thought of the nursing profession as risky and those who had anxieties for the profession had higher anxiety levels. It is possible for students who have negative attitudes for the profession to have other negative feelings as well. Negative thoughts can trigger other negative thoughts. As a result, anxiety levels of the students may have increased. There is always a risk in the profession of nursing. The most important risk-reduction method is to know and apply risk-combatting measures. Perhaps the reason students found the profession risky and had high anxiety for it could be because they lacked knowledge about risk-taking measures.

A positive significant association was found between age and *Characteristics of the nursing profession* subdimension in the current study. This result reveals that attitude for the profession increases positively with age. In a study conducted with nursing students by Kathreena et al.,<sup>41</sup> a positive significant association was found between age and attitude for the profession. The result of the study is in parallel with the literature.

A negative and significant association was found between the anxiety scale and ASNP and the *State of choosing nursing profession* subdimension. This result shows that attitude toward the nursing profession increases negatively with anxiety. Healthcare professionals are the ones fighting at the forefront in the COVID-19 pandemic, and they are expected to be the most essential and most effective group. Due to their close contact with patients affected by COVID-19, the risk for COVID-19 is higher in healthcare professionals when compared with others.<sup>42</sup> According to Ministry of Health data, 7428 healthcare professionals have been infected with COVID-19 in Turkey.<sup>43</sup> Such news has a negative effect on nursing students' attitudes for the profession and their attitudes toward choosing the nursing profession. For this reason, it can be said that

an increase in anxiety during the pandemic causes a decrease in positive attitude for the profession.

# 5 | CONCLUSION

In the present study, it was found that nursing students had positive attitudes for the nursing profession. It was also discovered that nursing students had moderate levels of anxiety for the nursing profession due to the pandemic. Furthermore, results revealed that nursing students who studied in cities where the virus was widespread had more positive attitudes for the profession, whereas those who studied in cities where virus levels were moderate and very common had higher anxiety levels. Moreover, the study indicated that gender, year of study, choosing the profession willingly, having anxiety for the profession, thinking about changing from nursing due to the pandemic affected attitudes toward the profession. Other noteworthy results included the fact that choosing the profession willingly, having anxiety for the profession, thinking of changing from the nursing profession, and finding the profession risky affected anxiety levels. Additionally, it was found that as age increased, positive attitudes for the profession also increased. Finally, results demonstrated that positive attitudes for the nursing profession decreased as anxiety levels increased.

# 6 | IMPLICATIONS FOR PSYCHIATRIC NURSING PRACTICES

Investigating the attitudes of nursing students toward the nursing profession is expected to affect the choice of profession and attitude toward the profession of nursing students, who are important healthcare personnel during the COVID-19 pandemic process. Planning in-service training programs aimed at improving the knowledge and attitudes of nursing students regarding attitudes toward profession, which is an important parameter in increasing the quality of patient care, is expected to positively affect students' attitudes toward the profession. For this reason, it is recommended to integrate the attitude toward profession into the educational process. In addition, determining the anxiety level of nursing students toward the nursing profession due to the pandemic and planning training to reduce their anxiety levels has an important place for nursing students, who are the care practitioners of the future. It is recommended to repeat the study in a comparatively larger universe.

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#### CONFLICT OF INTERESTS

All authors approve that they do not have any financial and personal relationships with other people, or organizations, that could in-appropriately influence (bias) this study and this manuscript.

#### DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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#### REFERENCES

- Yiğit İ, Gümüşçü O. The effect of epidemic diseases on settlement in Manisa and its surrounding. In: Proceedings of the XVIXX TÜCAUM International Geography Symposium; 2016:13-14.
- Zhu H, Wei L, Niu P. The novel coronavirus outbreak in Wuhan, China. Glob Health Res Policy. 2020;5(1):1-3. https://doi.org/10. 1186/s41256-020-00135-6
- World Health Organization. Director-General's remarks at the media briefing on 2019-nCoV on 11 February 2020. 2020. https:// www.who.int/dg/speeches/detail/who-director-general-s-remarksat-the-media-briefing-on-2019-ncov-on-11-february-2020
- Salari N, Hosseinian-Far A, Jalali R, et al. Prevalence of stress, anxiety, depression among the general population during the COVID-19 pandemic: a systematic review and meta-analysis. *Glob Health*. 2020;16(1):1-11. https://doi.org/10.1186/s12992-020-00589-w
- Tee ML, Tee CA, Anlacan JP, et al. Psychological impact of COVID-19 pandemic in the Philippines. J Affect Disord. 2020;277:379-391. https://doi.org/10.1016/j.jad.2020.08.043
- Wang C, Pan R, Wan X, Tan Y, Xu L, Ho C. Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. Int J Environ Res Public Health. 2020;17:1729. https://doi.org/10.3390/ijerph17051729
- Zhang WR, Wang K, Yin L, et al. Mental health and psychosocial problems of medical health workers during the COVID-19 epidemic in China. Psychother Psychosom. 2020:1-9. https://doi.org/10.1159/ 000507639
- Erskine R. Relational Patterns, Therapeutic Presence: Concepts and Practice of Integrative Psychotherapy. London: Karnac Books Ltd.; 2015.
- 9. Kring AM, Johnson SL. Abnormal Psychology. Ankara: Nobel; 2015.
- Şahin M. Fear, anxiety and anxiety (anxiety) disorders. Eurasian J Res Soc Econ. 2019;(10):117-135.
- Elliott CH, Smith LL. Overcoming Anxiety For Dummies. Indianapolis, IN: Wiley Publishing; 2010.
- 12. Şahin M. Biological Foundations of Behavior, Introduction to Psychology. Istanbul: License Publishing; 2017.
- 13. Johnston-Wilder S, Lee C. Mathematical resilience. *Math Teach*. 2010;218:38-41.
- Roger K, Hatala A. Religion, spirituality & chronic illness: a scoping review and implications for health care practitioners. *J Relig Spiritual Soc Work: Soc Thought.* 2018;37(1):24-44. https:// doi.org/10.1080/15426432.2017.1386151
- Mo Y, Deng L, Zhang L, et al. Work stress among Chinese nurses to support Wuhan in fighting against COVID-19 epidemic. J Nurs Manag. 2020;28(5):1002-1009. https://doi.org/10.1111/jonm.13014
- Larsen KS, Ommundsen R, Van Der Veer K. Being Human: Relationships and You. A Social Psychological Analysis. Amsterdam: Rozenberg Publishers; 2015.
- Dickerson C, Trodd L. Gaining professional recognition: exploring professionality and professional identity of early years practitioners

in higher education. *Teach High Educ.* 2020:1-18. https://doi.org/10. 1080/13562517.2020.1724935

- 18. Turkish Nurses Association. 2020. https://www.thder.org.tr/
- Pickles D, Lacey SD, King L. Conflict between nursing student's personal beliefs and professional nursing values. *Nurs Ethics*. 2019; 26(4):1087-1100. https://doi.org/10.1177/0969733017738132
- Raso A, Ligozzi L, Garrino L, Dimonte V. Nursing profession and nurses' contribution to nursing education as seen through students' eyes: a qualitative study. Nurs Forum. 2019;54(3):414-424. https:// doi.org/10.1111/nuf.12349
- Turkey Coronavirus Map. 2020. https://www.karar.com/saglikbakanligindan-corona-virus-turkiye-haritasi-iste-illere-gorekoronavirus-1557658
- 22. Çapık C. Statistical power analysis and its use in nursing research: basic information. *Anatol J Nurs Health Sci.* 2014;17(4):268-274.
- Bozkurt N. The Relationship Between Psychological Resilience and Cognitive Flexibility Levels with Exam Anxiety in Adolescents [Master Thesis]. Istanbul University; 2019.
- Coban G, Kasıkçı M. Development of the attitude scale for nursing profession. Int J Nurs Pract. 2011;17(5):518-524. https://doi.org/10. 1111/j.1440-172X.2011.01961.x
- Özpancar N, Aydın N, Akansel N. Determining the opinions of nursing first year students about the nursing profession. *Cumhur Univ Sch Nurs J.* 2008;12(3):9-17.
- Khatri P, & Sharma M. Attitude of the Nursing Students and Practicing Nurses toward Nursing Profession in Nepal. J Inst Med. 2018; 40(1):113-116.
- Kaya B. Effects of pandemic on mental health. J Clin Psy. 2020;23(2): 123-124. https://doi.org/10.5505/kpd.2020.64325
- Miligi E, Selim A. Saudi nursing students' attitudes towards the nursing profession. *Eur J Bus Manag.* 2014;6(29):197-208.
- Mai BH, Ho TMY, Nguyen TTT, Hoang TH, Phuong NTA. Attitudes and Perceptions Towards Nursing Profession Among Nursing Students at Hue University of Medicine and Pharmacy. J Prob-Based Learning. 2018;5(2):55-62.
- Al Mutair A, Redwan F. Undergraduate Saudi nursing students attitudes towards nursing profession. J Nurs Care. 2016;5(329): 2167-1168.
- Gol I. Nursing students' attitudes towards the nursing profession in relation to their altruism levels. *Int J Caring Sci.* 2018;11(2):663-671.
- Korkmaz F. Nurses' Views on the Nursing Profession [Master]. Ankara: Hacettepe University; 2002.
- Kalemoğlu VY, Erbaş MK, Hüseyin Ü. The predictive power of professional anxiety levels of physical education teacher candidates at their attitudes towards teaching profession. SPORMETRE Phys Educ Sport Sci J. 2014;12(2):113-123.
- Keskin Y. The attitude and anxiety levels of geography teacher candidates towards the teaching profession (Erzurum Example). *e-Kafkas J Educ Res.* 2017;4(2):43-57.
- Euronews. Why Are Women More Resistant to COVID-19 Than Men? 2020. https://tr.euronews.com/2020/04/27/koronavirus-covid-19-kadinlar-daha-dayanikli-peki-erkekler-neden-daha-kolay-oluyor
- Zencir G. The relationship between preference and attitudes towards nursing nursing students about the profession: the case of Turkey. Dokuz Eylul Univ Fac Nurs Electron J. 2016;9(2):30-36.
- Özdelikara A, Ağaçdiken S, Aydın E. Career choice of nursing students and affecting factors. ACU J Health Sci. 2016;2:83-88.
- International Council of Nurses. Covid-19 & International Year of the Nurse and the Midwife 2020. 2020. https://www. 2020yearofthenurse.org/
- Hou F, Bi F, Jiao R, Luo D, Song K. Gender differences of depression and anxiety among social media users during the COVID-19 outbreak in China: a cross-sectional study. BMC Public Health. 2020; 20(1):1-11. https://doi.org/10.1186/s12889-020-09738-7

- Sevinç S, Özdemir S. Relationship between Nursing Students' Anxiety and Hopelessness: Kilis Example. Nurs Res Dev. 2017;19(2): 14-24.
- 41. Kathreena M, Jaslyn JDS, Jasmine ML, Sonia KLS. A study to assess the attitude towards nursing profession among the nursing students in the selected college at Mangalore. *Int J Health Sci Res.* 2015;5(10): 217-220.
- Alıcı NŞ, Beyan AC, Şimşek C. COVID-19 as an Occupational Disease. 2020. http://www.solunum.org.tr/TusadData/userfiles/ file/EJP-EK-SAYI-COVID19-27042020.pdf#page=149
- 43. Chamber of Medical Doctors. 2010; Retrieved from https://www. istabip.org.tr/koronavirus/Haberler/5795/covid-19-ile-enfekte-

saglik-calisanlarinin-bildiriminde-karsilasilan-sorunlara-yonelik-rehber.11.11.2020.

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