

## Original Article

# Determination of Covid-19 Fear and Affecting Factors of Midwifery Department Students

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### Abstract

**Aim:** This study was aimed to determine the fear of COVID-19 and the factors affecting the students studying in the midwifery department.

**Method:** This school-based and descriptive study was conducted between November and December 2020. The universe of the study is 257 students who continue their education in Yozgat Bozok University Health Sciences Faculty Midwifery Department. The sample was made up of 250 students who participated in the study. Study data were collected online via the Personal Information Form and the Fear of COVID-19 Scale.

**Result:** The mean scores of the Covid-19 Fear Scale of the students were  $19.08 \pm 5.87$  (min. = 7, max. = 35). The factors that cause fear were insufficient information on COVID-19 and low income level ( $p < 0.05$ ). Students' age, classes, residential areas, social support status, employment status and current mental health problems did not affect the level of fear ( $p > 0.05$ ).

**Conclusion:** According to the research findings, midwifery students experience a moderate fear of COVID-19. Insufficient information on COVID-19 and low income level affected fear of COVID-19. As a result, it is recommended to organize structured education programs regarding the COVID-19 process and to identify and support students who are in critical condition in socio-economic terms.

**Keywords:** Covid-19, fear, midwifery, pandemic, students

### Introduction

Pandemic is defined as the spread of epidemic diseases to other countries and continents by crossing the borders of the country and affecting a large number of people (Doshi, 2011). When looking at history, it is seen that a large number of pandemics caused the death of millions of people. Plague, Cholera, Typhus, AIDS, SARS, MERS, Ebola are

among the pandemics that have shaken the world with their dramatic effects (Oztek, 2021).

The first case of the COVID-19 pandemic process we are in today spread to neighboring countries and then to the whole world, after being detected in Whuan, China on December 1, 2019. In the face of this situation, the World Health Organization defined the

epidemic as a pandemic on March 11, 2020 and called on all countries to take action (Liu, Kuo, Shih, 2020).

In Turkey, the first case were reported on March 10, 2020. 44, 059 number of people who lost their lives in the country as of today (Republic of Turkey Ministry of Health, 2021).

The negative effects of COVID-19, which has a high rate of contagiousness and mortality, have been demonstrated on mental health as well as its negative effects on physical health. As an example of these effects; Fear of contact with individuals with Covid-19, fear of getting sick, stigmatization process caused by fear, sleep disorders, anxiety, increase in depressive symptoms, on the other hand, positive thoughts and decrease in quality of life can be given. (Bakioglu, Korkmaz, Ercan, 2020; Centers for Disease Control and Prevention, 2021; Choi, Hui, Wan, 2020; Huang & Zhao, 202; Lin, 2020; Sher, 2020). While COVID-19 threatens the entire world population, undisputedly, healthcare workers are among the most affected by the epidemic (World Health Organization, 2020a).

The mental health of students studying in the field of health sciences is as important as healthcare professionals who are on duty today and struggling with devotion to protect public health.

In particular, students of Midwifery Department must continue clinical practice in order to complete the graduation criteria (Council of Higher Education, 2016).

Due to Covid-19, the transfer of education and clinical practices to the online platform and / or practice training at the hospital under pandemic conditions affect midwifery students (Sogut, Dolu, Cangol, 2020).

In a limited number of studies conducted with students, it was shown that face-to-face education was interrupted with the social isolation decisions taken to reduce the transmission rate of the disease, and therefore the transition to distance education caused psychological symptoms. In addition to these,

it is stated that female students, especially adolescent students, constitute a more vulnerable group in terms of psychological problems caused by COVID-19 (Cao et al., 2020; Lemyre, Gauthier-Légaré, Bélanger, 2019; Merikangas et al., 2010; Osborn et al., 2020; Siegel & Dickstein, 2012).

Based on this, it was seen in the literature review that there was no study evaluating the fear of COVID-19 in the students studying in the midwifery department.

Therefore, in this study, it was aimed to examine the fear of COVID-19 and the factors affecting the students studying in the midwifery department.

### Research questions

- What is the level of midwifery students' fear of COVID-19?
- What are the factors that affect midwifery students' fear of COVID-19?

### Material and Methods

**Study design and the sample:** The sample of the school-based and descriptive study was created by a simple random method. The research was conducted between November and December 2020 at the Department of Midwifery, Faculty of Health Sciences, Yozgat Bozok University. In the 2019-2020 academic year, 257 students who continued their studies in the Department of Midwifery of the Faculty of Health Sciences of Yozgat Bozok University formed the universe of the research. In the study, the sample size was not calculated and it was aimed to reach all students.

At the end of the study, 97% of the universe was reached by receiving feedback from 250 students. Sample acceptance criteria; It was to study in the Department of Midwifery of the Faculty of Health Sciences of Yozgat Bozok university and to voluntarily participated in the study.

**Measurements:**

Participant data form and Fear of COVID-19 Scale were used as data collection tools in the study.

**Participant Information Form:** By scanning the literature by researchers (Cao et al. 2020; Sogut, Dolu, Cangol, 2020) the developed form included questions about such as age, gender, economic status, where the participants lived, family income status, student employment status, class they studied, they had a mental health problem or not. We aimed at determining their socio-demographic characteristics. In addition, the form contained three questions about participants' views on their level of knowledge of the Covid-19 process, the negative impact of the process on them, and the existence of support elements.

**Fear of COVID-19 Scale:** The scale was developed by Ahorsu et al in 2020 to determine individuals' fear of Covid-19 (Ahorsu et al., 2020). The Turkish language validity of the scale was made by Bakioglu and his colleagues in 2020. There was no inverse item on this scale, consisting of 7 items.

A Likert-type five rating was used to determine the level of participation of people in each questionnaire, such as "strongly disagree (1)", "disagree (2)", "neither agree nor disagree (3)", "agree (4)", "strongly agree (5)". The total score from all substances on the scale reflected the level of Coronavirus (Covid-19) fear experienced by the individual. Scores on the scale ranged from 7 to 35.

A high score on a scale with no cutting value meant experiencing a high level of coronavirus fear (Bakioglu, Korkmaz, Ercan, 2020). Cronbach's alpha value of the original scale was 0.82; the Turkish version was 0.88 (Ahorsu et al., 2020; Bakioglu, Korkmaz, Ercan, 2020). In this study, Cronbach's alpha value of the scale was calculated at 0.86

**Data collection process:** During the data collection process, data collection tools and

the participant consent form were transferred to the online environment through Google Forms\*. After obtaining the necessary permissions, online surveys were sent to student emails received from the university administration.

Completed surveys were analyzed by transferring them to the Microsoft Excel environment and then to the SPSS environment.

**Statistical Analyses:** Shapiro Wilk normality test was conducted to test whether the data conformed to the normal distribution. "Independent Sample T Test" and "One Way Analysis of Variance" were used to evaluate normally distributed data, and "Mann Whitney U test" was used for analysis of non-normally distributed data.

The "Bonferroni test" was used to determine which group caused the difference in more than one group.

**Ethical Considerations:** Before starting the study, ethical approval was obtained from the Yozgat Bozok University Clinical Research Ethics Committee (Decision Number: 2017-KAEK-189\_2020.10.14\_12). For the work permit, Yozgat Bozok University Faculty of Health Sciences management and T.C.

Necessary permissions were obtained from the Scientific Research Studies Board of the Ministry of Health, General Directorate of Health Services.

The students filled the participant consent forms prepared according to the Declaration of Helsinki.

**Results**

250 students participated in the study. The distribution of some socio-demographic characteristics of the students is given in Table 1.

Table 2 contains the distribution of information about some characteristics and experiences of the students about Covid-19. The mean scores of the Covid-19 Fear Scale of the students included in the study were

calculated as  $19.08 \pm 5.87$  (min. = 7, max. = 35).

The comparison of the mean scores of the Covid-19 fear scale according to some characteristics of the students is given in Table 3.

It was determined that the students' age groups, classes, place of residence, employment status did not affect the Fear of COVID-19 Scale mean scores ( $p > 0.05$ ).

It was determined that the mean scores of the Covid-19 Fear Scale of the students whose income was less than their expenses were higher than the students whose income was equal to their expenses and that the difference was statistically significant ( $p < 0.05$ ). It was as determined that social support status did not affect the Fear of COVID-19 Scale average score ( $p > 0.05$ ).

## Discussion

In this study, in which the fear level of COVID-19 and the factors affecting the students studying in the Midwifery Department was investigated, it was determined that the majority of the participants were middle-income students in their 20s, living in the provincial centers and without an income-generating job. While the Covid-19 pandemic continues to exist with many unknowns, new information gained day by day helps the process to be controlled and managed effectively.

Therefore, correct information flow is extremely important for all segments of the society (World Health Organization, 2020b). The level of knowledge about the Covid-19 of midwifery students in a study conducted in Turkey were found to be  $16.57 (\pm 1.29)$  (Sogut, Dolu, Cangol, 2020).

Similarly, in a joint study conducted in Australia and India, the Covid-19 knowledge level of nursing students (Australia 82.9%, India 95.6%) was reported to be quite high (Kochuvilayil et al., 2020). Unlike other studies, the vast majority of students in this study found their knowledge of the Covid-19 process partially sufficient (49.2%).

It is thought that the educational differences between countries and regions and the sources of information used cause this situation. The average of students in a study with university students Turkey Fear of COVID-19 Scale scores are reported to receive  $16.87 \pm 6.69$ .

Noting that the scores that can be obtained from the scale vary between 7 and 35 and that the high score obtained from the scale means experiencing a high level of coronavirus fear so students experienced 'moderate' fear of Covid-19 (Duman, 2020).

The scores of university students in studies conducted with the same scale in different countries are;  $14.37 \pm 5.38$  in Ecuador (Rodriguez-Hidalgo et al., 2020),  $18.1 \pm 7.1$  in the USA (Perz, Lang, Harrington, 2020),  $22.1 \pm 5.8$  in Kazakhstan (Konstantinov et al., 2020) and  $22.2 \pm$  in Russia 5.9 (Gritsenko et al., 2020). In this study, the average score obtained by the students from the same scale was  $19.08 \pm 5.87$ , which is consistent with the literature examples given except for the Equator example.

Based on this, it is accepted that midwifery students have a moderate fear of COVID-19 similar to other university students. Some variables have been shown in the literature to affect students' COVID-19 fear and anxiety. Accordingly, conservative students reported higher levels of anxiety and fear than secular students, Asian students compared to non-Asian students, married students compared to single students (Gritsenko et al., 2020; Perz, Lang, Harrington, 2020).

Study results on the relationship between gender and COVID-19 fear are contradictory. (Gritsenko et al., 2020; Rodriguez-Hidalgo et al. 2020). Comparisons made in this study found that students' classes, where they live, their employment status, their age, and their social support status did not affect the average score of the COVID-19 fear scale. Perz, Lang, Harrington, (2020) study also reported that age factor did not affect COVID-19 fear level of university students.

There is no study comparing COVID-19 fear with the settlements where students live. In contrast, Cao et al. (2020) examined the effect of settlement on COVID-19 anxiety and reported that anxiety levels of students living in urban areas were lower than those living in the rural areas. There are studies showing an association between Covid-19 fear and anxiety, depression, and substance use in college students (Chaudhary et al., 2020; Gritsenko et al. 2020; Perz, Lang, Harrington, 2020; Rodriguez-Hidalgo et al., 2020; Şahin, Aydın, Kulakaç, 2021).

In this study, those who were diagnosed with any mental health problems during the pandemic were compared, but no difference was found in terms of fear of COVID-19. This finding points out that, contrary to the literature, current mental health problems do not affect the Covid-19 fear of the study population.

There was no study in the literature showing an association between students' income level and COVID-19 fear. In contrast, Cao et al., (2020) found that students whose parents did not have a regular income had a high anxiety rate during the COVID-19 process compared to those who had a regular income. In this study, it was also found that students with less income than expenses had a higher fear of COVID-19 ( $p < 0.05$ ). It is believed that

this is due to the fear of shrinking and unemployment that the pandemic process creates in the budgets of middle and low-income families.

As discussed above, the rate at which participants in this study found COVID-19 information sufficient is not at the desired level compared to literature samples. Based on this, the comparison found that students who found the COVID-19 level of knowledge insufficient were more afraid of COVID-19 ( $p < 0.05$ ).

There are no studies in the literature showing the effect of university students' knowledge level on COVID-19 fear. In contrast, Sogut, Dolu, Cangol, (2020) report that there is no association between the anxiety scores of midwifery students and the knowledge level of COVID-19.

On the other hand, a study conducted in Turkey reported a significant increase in health literacy score average and healthy lifestyle behaviors for COVID-19 in nursing students with high knowledge and awareness about COVID-19 (Kaya & Kaplan 2020). It is assumed that providing accurate information based on findings and literature samples will reduce students' fear of COVID-19 by breaking the blind cycle between obscurity and fear.

**Table 1. Distribution of some socio-demographic characteristics of the students**

Features	n	%
<b>Average age (years)</b> 20.51±1.65 (min:18—max:27)		
<b>Class</b>		
First class	80	32.0
Second class	71	28.4
Third grade	61	24.4
Fourth grade	38	15.2



<b>Living place</b>		
Provincial	125	50.0
District	81	32.4
Village-town	44	17.6
<b>Economical situation</b>		
Income less than expenses	48	19.2
Income more than expenses	20	8.0
Income equal to expenses	182	72.8
<b>Employment status</b>		
Employed	35	14.0
Unemployed	215	86.0
<b>Having a previous or ongoing mental health problem</b>		
Yes	9	3.6
No	241	96.4
Total	<b>250</b>	<b>100</b>

**Table 2. Distribution of some characteristics and experiences of students about Covid-19**

<b>Features</b>	<b>n</b>	<b>%</b>
<b>Knowledge level about Covid-19</b>		
Enough	101	40.4
Partially enough	125	50.0
Insufficient	24	9.6
<b>Conditions affected during the epidemic *</b>		
Avoiding friends and social environment	242	91.6
Face-to-face training stopped	225	85.2
Inability to practice in clinics	202	76.5
Getting fat	117	44.3
Economic negative impact	116	43.9
Mental health being negatively affected	115	43.5
Covid-19 caught / treated nearby	115	43.5
Loneliness and helplessness	87	32.9
Caught / treated for Covid-19	26	9.8

**Having social support during the epidemic**

Yes	163	65.2
No	87	34.8
<b>Total</b>	<b>250</b>	<b>100</b>

\* Percentages were taken over n = 250. Only two students stated that they were not affected negatively.

**Table 3. Comparison of the mean scores of the Covid-19 Fear Scale according to some characteristics of the students**

<b>Features</b>	<b>Fear of COVID-19 Scale <math>\bar{x} \pm SD</math></b>	<b>Test</b>	<b>P</b>
<b>Age group</b>			
18-22	19.08±5.80	T=-	p=00998
23-27	19.08±6.78	0.003 <sup>1</sup>	
<b>Class</b>			
First class	18.80±6.09		
Second class	18.58±5.27	t=0,967 <sup>2</sup>	p=0.409
Third grade	20.05±6.06		
Fourth grade	18.68±6.03		
<b>Living place</b>			
Province	19.10±5.73	t=0,428 <sup>2</sup>	p=0.652
District	19.41±5.67		
Village-town	18.43±6.65		
<b>Economical situation</b>			
Income less than expenses	21.07±5.61*	<b>t=3.936<sup>2</sup></b>	<b>p=0.021</b>
Income equal to expenses	18.62±5.94		
Income more than expenses	18.25±5.12		
<b>Employment status</b>			
Employed	18.97±5.80	t=-0,129 <sup>1</sup>	p=0.898
Unemployed	19.10±5.90		
<b>Knowledge level about Covid-19</b>			

Enough	18.35±6.01	$t=14.515$	$p=0.000$
Partially enough	18.46±5.38	<sup>2</sup>	
Insufficient	24.26±4.96*		
<b>Having social support during the epidemic</b>			
Available	19.23±5.97	$t=0,564$ <sup>3</sup>	$p=0.573$
Non	18.80±6.56		
<b>Having a previous or ongoing mental health problem</b>			
Available	20.56±6.66	$t=-$	$p=0.224$
Non	18.98±5.82	1.2153 <sup>4</sup>	

<sup>1</sup> Independent Sample T Test <sup>2</sup> One-Way Analysis of Variance \* The group from which the difference originated (Bonferroni post hoc test was performed) <sup>3</sup> Independent Sample T Test, <sup>4</sup> Mann Whitney U Test

Some variables have been shown in the literature to affect students' COVID-19 fear and anxiety. Accordingly, conservative students reported higher levels of anxiety and fear than secular students, Asian students compared to non-Asian students, married students compared to single students (Gritsenko et al., 2020; Perz, Lang, Harrington, 2020). Study results on the relationship between gender and COVID-19 fear are contradictory. (Gritsenko et al., 2020; Rodriguez-Hidalgo et al. 2020 ).

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On the other hand, a study conducted in Turkey reported a significant increase in health literacy score average and healthy lifestyle behaviors for COVID-19 in nursing students with high knowledge and awareness about COVID-19 (Kaya & Kaplan 2020).

It is assumed that providing accurate information based on findings and literature samples will reduce students' fear of COVID-19 by breaking the blind cycle between obscurity and fear.

**Conclusion:** Included in this study, midwifery department students experience moderate levels of COVID-19 fear. Factors that cause fear are a lack of knowledge about COVID-19 and a low level of income. Students' age, class, settlement region, social support, employment status, and current mental health problems do not affect covid-19 fear levels. In order to reduce the fear level of students, it is recommended to organize structured educational programs related to the COVID-19 process and identify and support socio-economically critical students.

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