

Fear of Infectious Contagion/Transmission among Health Sciences Students and Its Relationship to Their Attitudes Toward the COVID-19 Vaccine*

Sağlık Alanında Öğrenim Gören Öğrencilerde Enfeksiyon Bulaş/Bulaştırma Korkusu ve COVID-19 Aşısına Yönelik Tutumları ile İlişkisi*

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Abstract

Objective: As part of their educational program, health sciences students participate in clinical practice in healthcare institutions. Thus, this group, which is at the center of the risk of infection, is highly likely to encounter infectious diseases. This study aims to investigate the fear of infection contagion/transmission and attitudes toward the COVID-19 vaccine in health sciences students and examine the relationship between them.

Methods: Data were collected using the "Data Collection Form", "Fear of Contagion/Transmission Scale", and "Attitudes Towards the COVID-19 Vaccine (ATV-COVID-19) Scale".

Results: A total of 303 health sciences students (nursing, nutrition and dietetics, physical therapy and rehabilitation) participated in the study. It was observed that 72.2% of the students lived with their families, and 42.6% had a family member with a chronic disease. In addition, 91.1% reported COVID-19 vaccination, and 48.2% reported COVID-19 infection. The mean score of participants' fear of contagion/transmission was 89.38±14.58, and the sub-dimension "fear of social transmission" received the highest score. A weakly significant negative relationship existed between fear of contagion/transmission and positive attitude toward the COVID-19 vaccine.

Conclusion: As a result of the study, it was found that fear of infection contagion/transmission among students was associated with a positive attitude toward the COVID-19 vaccine.

Keywords: Attitude, COVID-19, fear, fear of contagion, student, transmission, vaccine.

Öz

Amaç: Sağlık alanında öğrenim gören öğrenciler eğitim müfredatı gereği sağlık kuruluşlarında klinik uygulama yapmaktadır. Bu nedenle enfeksiyon riskinin merkezinde yer alan bu grubun, bulaşıcı hastalıklar ile karşılaşma olasılığı oldukça yüksektir. Bu çalışmanın amacı, sağlık alanında öğrenim gören öğrencilerde enfeksiyon bulaş/bulaştırma korkusu ve COVID-19 aşısına yönelik tutumlarını belirlemek ve aralarındaki ilişkiyi incelemektir.

Yöntemler: Çalışmanın verileri "Veri Toplama Formu", "Bulaş/Bulaştırma Korkusu Ölçeği" ve "COVID-19 Aşısına Yönelik Tutum Ölçeği" kullanılarak elde edildi. Çalışmaya sağlık alanında öğrenim gören 303 öğrenci (hemşirelik, beslenme ve diyetetik, fizyoterapi ve rehabilitasyon) katıldı.

Bulgular: Öğrencilerin %72,2'sinin ailesi ile birlikte yaşadığı ve %42,6'sının ailesinde kronik hastalığa sahip birey olduğu saptandı. Ayrıca, %91,1'i COVID-19 aşısı yaptırdığını ve %48,2'si ise COVID-19 enfeksiyonu geçirdiğini bildirdi. Katılımcıların enfeksiyon bulaş/bulaştırma korkusu puan ortalaması 89,38±14,58 olarak bulunurken, "sosyal bulaş korkusu" alt boyutu en yüksek puanı aldı. COVID-19 aşısına yönelik tutumları değerlendirildiğinde olumlu tutum puan ortalaması 2,60±0,91 ve olumsuz tutum puan ortalaması 3,11±0,73 olarak belirlendi. Enfeksiyon bulaş/bulaştırma korkusu ile COVID-19 aşısına yönelik olumlu tutum arasında ters yönde zayıf düzeyde anlamlı ilişki olduğu belirlendi.

Sonuç: Çalışmanın sonucunda öğrencilerde enfeksiyon bulaş/bulaştırma korkusunun COVID-19 aşısına karşı olumlu tutum ile ilişkili olduğu belirlendi.

Anahtar Kelimeler: Aşı, bulaş, bulaştırma korkusu, COVID-19, öğrenci, tutum.

INTRODUCTION

Infectious diseases are diseases caused directly or indirectly by microorganisms.¹ Throughout history, people have encountered and continue to encounter various infectious diseases. These diseases affect society in different social and economic dimensions and cause fear and anxiety in individuals related to the disease.²⁻³ Studies have shown that the fear of infection contagion/transmission can cause many psychosocial problems in individuals.⁴⁻⁶

Fear of contamination is considered to be the fear of direct or indirect contact with a person or substance believed to be infected or harmful. However, people can develop a fear of contagion based on thoughts without requiring a concrete external source.⁷ Coronavirus, in other words, COVID-19, has severely affected the world. The disease has caused serious morbidity and mortality and increased fear and anxiety in individuals.⁸ Therefore, the psychosocial impact of COVID-19 on people worldwide has been the focus of researchers.

One of the most successful public health initiatives to prevent infectious diseases is vaccination.⁸ Vaccination is known to protect the health of individuals of all ages worldwide and provides social immunity.⁹ However, anti-vaccination, which has gained momentum, especially in recent years, is an obstacle in the fight against infectious diseases. It is explained that people refuse to be vaccinated, abstain from vaccination or show resistance to vaccines due to lifestyle, economic, political, cultural, and religious reasons.¹⁰

Health science students complete clinical rotations in healthcare settings such as hospitals and community health centers as part of their educational curriculum. Therefore, at the center of infection risk, this group has a high probability of encountering infectious diseases. In the study of Koç and Bilgehan,² the importance of determining the fear of infection contagion/transmission is emphasized, considering that the social life of university students is more active. To the best of our knowledge, no study in the literature examines the relationship between fear of infection contagion/transmission and attitudes toward COVID-19 vaccination among health science students.

Research questions:

Health science students,

- What is the level of fear of infection contagion/transmission?
- What are their positive and negative attitudes towards the COVID-19 vaccine?
- What is the relationship between fear of infection contagion/transmission and attitudes towards the COVID-19 vaccine?

The aim of this study was to determine the attitudes of health science students toward the fear of infection contagion/transmission and the COVID-19 vaccine and to examine the relationship between them.

METHODS

Population and Sample of the Research: The study was prospective, descriptive, and cross-sectional. Data were collected by questionnaire between November and December 2022. Students (n=349) studying in the departments of Nutrition and Dietetics, Physiotherapy and Rehabilitation, and Nursing at the Faculty of Health Sciences of a university were included in the study. The study was completed with 303 students (86.8%) who agreed to participate and completed the data collection form.

Data Collection: Data were collected using the "Data Collection Form", which were developed based on the literature, "Fear of Contagion/Transmission Scale" and "Attitudes Towards the COVID-19 Vaccine (ATV-COVID-19) Scale".

Data collection form: Data collection form was created by conducting literature research^{2,5,11-12}. The form consisted of 23 questions about participants' sociodemographic characteristics, education, history of infectious diseases, COVID-19, and vaccinations.

Fear of contagion/transmission scale: This scale was developed by Koç and Bilgehan². The scale, which was developed with university students, assesses the individual's fear of infection contagion/transmission. The scale consists of a total of 24 items, including four sub-dimensions. Each item in the scale is in a 5-point Likert type; the minimum score obtained from the scale is 24, and the maximum score is 120. As the score increases, the fear of contagion/transmission increases. The overall Cronbach's alpha reliability coefficient of the scale was determined to be .909. The scale's subdimensional Cronbach's alpha values were .748 for fear of contact transmission, .791 for fear of virtual transmission, .857 for fear of social transmission, and .745 for fear of healthcare transmission. In this study, Cronbach's alpha values were .754 for fear of contact transmission, .757 for fear of virtual transmission, 0.884 for fear of social transmission, .796 for fear of healthcare transmission, and .905 for the total scale score.

Attitudes towards the COVID-19 vaccine (ATV-COVID-19) scale: The scale developed by Geniş et al.¹¹ is a 5-point Likert-type scale consisting of two sub-dimensions (positive and negative attitudes) and 9 items. High scores on the positive attitude sub-dimension indicate a positive attitude towards vaccination. Higher scores on the negative attitude sub-dimension indicate less negative attitudes towards vaccination. Cronbach's alpha values of the scale were found to be .96 for the positive dimension and .78 for the negative dimension. In this study, it was found to be .901 for the positive attitude dimension and .803 for the negative attitude dimension.

Ethical aspect of the study: The study adheres to the ethical principles stated in the Declaration of Helsinki. The necessary permissions were obtained from the institution where the study took place. The study received approval from the Istanbul Culture University Institutional Review Board (IRB) on [IRB date and number: 14.10.2022/2022.139]. Verbal and written informed consent was obtained from participants who met the study criteria. Participants were guaranteed that their responses would be kept anonymous and confidential.

Data Collection: After obtaining permission, nurses were informed about the purpose of the study. Nurses who agreed to participate in the study were interviewed face-to-face and data were collected in approximately 5-10 minutes.

Statistical analysis: SPSS Statistics 24.00 software was used for data analysis. Continuous variables were expressed as mean \pm SD, and categorical variables were expressed as percentages. Independent samples t-test, Mann-Whitney U test, one-way analysis of variance, and Kruskal-Wallis H test were used to compare data. LSD and Mann-Whitney U test were used as post hoc tests. Spearman and Pearson correlation analyses assessed the relationship between continuous variables. For all tests, two-tailed *P* values $<.05$ were considered significant.

RESULTS

The mean age of the students in the study was 20.78 ± 2.41 years. The majority of participants were female (82.8%), students in the Department of Nutrition and Dietetics (40.3%), first-year students (32.3%), without chronic diseases (88.4%), and without previous work experience in the field of health (68.6%) (Table 1).

Table 1. Descriptive Characteristics of Students (N=303)

		n	%
Age	Mean±SD (Min.-Max.)	20.78±2.41 (17-42)	
Gender	Male	52	17.2
	Female	251	82.8
Department	Nutrition and Dietetics	122	40.3
	Physical Therapy and Rehabilitation	74	24.4
	Nursing	107	35.3
Grade	First	98	32.3
	Second	65	21.5
	Third	94	31.0
	Fourth	46	15.2
Presence of chronic disease	Yes	35	11.6
	No	268	88.4
Place of residence	At home with family	237	78.2
	At home with friends	10	3.3
	Home alone	12	4.0
	In a dormitory	44	14.5
Presence of chronic disease in the family	Yes	129	42.6
	No	174	57.4
Previous work experience in the field of health	Yes	95	31.4
	No	208	68.6
Knowledge of transmission routes of infections	Yes	120	39.6
	Partially	158	52.1
	Undecided	20	6.6
Previous history of infectious disease	Yes	155	51.2
	No	148	48.8
	Partially	133	43.9
Adequacy of personal protective equipment	Yes	113	37.3
	No	57	18.8
	Partially	133	43.9
COVID-19 vaccination	Yes	276	91.1
	No	27	8.9
COVID-19 infection history	Yes	146	48.2
	No	157	51.8
Loss of a close relative due to COVID-19	Yes	130	42.9
	No	173	57.1

The students' mean score in the study was 89.38±14.58 for fear of infection contagion/transmission. The mean scores of students' attitudes towards the COVID-19 vaccine were 2.60±0.9 for the positive attitude sub-dimension and 3.11±0.73 for the negative attitude sub-dimension (Table 2).

Table 2. Students' Fear of Contagion/Transmission Scale and ATV-COVID-19 Scale Scores N=303

	Mean	SD	Min	Max	
Fear of Contagion/ Transmission Scale	Fear of Contact Transmission	20.39	3.51	5.00	25.00
	Fear of Virtual Transmission	18.35	4.79	6.00	30.00
	Fear of Social Transmission	32.13	6.12	8.00	40.00
	Fear of Healthcare Transmission	18.51	4.22	5.00	25.00
	Total Score	89.38	14.58	29.00	120.00
ATV-COVID-19 Scale	Positive Attitude	2.60	0.91	1.00	5.00
	Negative Attitude	3.11	0.73	1.00	5.00

ATV-COVID-19: Attitudes Towards the COVID-19 Vaccine Scale n: Sayı %: Yüzde

Fear of infection contagion/transmission scores were statistically significantly higher among female participants ($p=0.01$). Negative attitude scores toward the COVID-19 vaccine were significantly higher among those who had previously had an infectious disease ($p=0.03$). The positive attitude scores of those who had received the COVID-19 vaccine ($p < 0.001$) and the negative attitude scores of those who had not received the vaccine were significantly higher ($p < 0.001$) (Table 3).

Table 3. Factors Influencing Students' Fear of Infection Contagion/Transmission and Attitudes Toward COVID-19 Vaccination (N= 303)

	Fear of Contagion/ Transmission Scale								ATV-COVID-19 Scale					
	Fear of Contact Transmission	Test, P	Fear of Virtual Transmission	Test, P	Fear of Social Transmission	Test, P	Fear of on Healthcare Transmission	Test, P	Total Score	Test, P	Positive Attitude	Test, P	Negative Attitude	Test, P
Gender														
Female	20.55	-	18.49±	-	32.52±	-	18.82±	-	90.39±	-	2.69±	0.83	3.12±	-
Male	±3.35	1.5	4.64	1.12	5.83	2.49	3.99	2.80	13.928	2.65	0.35	9%	0.72	0.72
	19.62	46*	17.67±	6%	30.21±	9%	17.04±	0%	4.54±1	8%	2.58±	.40	3.04±	4%
	±4.12	.12	5.43	.26	7.12	.01	4.96	.01	6.75	.01	0.90		0.78	.47
Department														
Nutrition and Dietetics	20.94		17.99±		32.02±		18.51±		89.47±		2.71±		3.10±	
Physical Therapy and Rehabilitation Nursing	±3.54	8.7	4.49	0.59	5.84	0.06	4.07	0.65	13.91	0.13	0.91	0.60	0.74	0.26
	19.86	20 ^x	18.66±	2 ⁿ	32.04±	6 ⁿ	18.08±	8 ⁿ	88.65±	8 ⁿ	2.54±	.40	3.16±	3 ⁿ
	±3.43	.01	5.22	.55	6.44	.94	4.83	.52	16.55	.87	0.89	.20	0.53	.77
	20.13		18.55±		32.30±		18.81±		89.79±		2.51±		3.08±	
	±3.46		4.82		6.26		3.92		13.99		0.92		0.84	
Grade														
First	20.19	0.3	18.13±	0.21	32.87±	3.05	18.14±	0.69	89.34±	0.32	2.78±	2.18	3.08±	1.21
Second	±3.95	28 ^x	4.37	1 ⁿ	6.62	1 ⁿ	4.01	0 ⁿ	14.82	1 ⁿ	0.13	7 ⁿ	0.70	4 ⁿ
Third	20.52		18.29±		33.25±		18.75±		90.82±		2.44±		3.06±	
Fourth	±3.32	.95	4.73	.89	5.68	.03	4.61	.56	14.08	.81	1.05	.09	0.83	.31
	20.67		18.40±		31.50±		18.41±		88.99±		2.52±		3.09±	
	±2.84		5.29		6.06		4.24		14.76		0.91		0.74	

	20.07 ±4.01		18.80± 4.76		30.24± 5.25		19.15± 4.04		88.26± 14.73		2.59± 0.83		3.30± 0.58	
Presence of chronic disease	19.00 ±3.56	- 2.6	17.86± 3.48	- 0.65	30.26± 7.41	- 1.92	18.74± 4.32	0.34 5¥	85.86± 11.37	- 1.52	2.84± 0.91	1.66 1¥	3.02± 0.63	- 0.79
Yes	20.57 ±3.46	69* .01	18.42± 4.93	1¥ .52	32.37± 5.90	9¥ .06	18.48± 4.21	.73	89.84± 14.91	4¥ .13	2.56± 91	.10	3.12± 0.74	2¥ .43
Previous work experience of health	20.76 ±3.29	- 1.2	19.27± 5.07	- 2.27	32.11± 5.55	- 0.03	19.64± 3.81	3.20 3¥	91.78± 13.98	- 1.94	2.50± 0.87	- 1.22	3.20± 0.73	1.50 8¥
Yes	20.23 ±3.59	40* .22	17.93± 4.60	8¥ .02	32.13± 6.37	9¥ .97	18.00± 4.30	.00	88.29± 14.75	2¥ .06	2.64± 0.93	6¥ .22	3.07± 0.72	.13
Previous history of infectious disease	20.24 ±3.63	- 0.6	18.01± 4.77	- 1.29	32.48± 6.30	1.04 4¥	18.87± 4.42	1.52 2¥	89.60± 15.10	0.26 5¥	2.65± 0.90	1.02 9¥	3.20± 0.68	2.14 6¥
Yes	20.55 ±3.38	27* .53	18.72± 4.79	2¥ .20	31.75± 5.92	.30	18.14± 3.97	.13	89.16± 14.07	.79	2.54± 0.93	.30	3.02± 0.77	.03
COVID-19 vaccination n	20.48 ±4.32	- 0.6	16.85± 5.64	- 1.71	30.81± 8.58	- 1.16	17.07± 4.86	- 1.86	85.22± 18.42	- 1.55	3.28± 0.60	4.18 3¥	2.73± 0.71	- 2.89
Yes	20.38 ±3.42	72* .51	18.50± 4.68	3¥ .09	32.25± 5.83	7¥ .24	18.65± 4.13	4¥ .06	89.79± 14.13	7¥ .12	2.53± 0.91	.00	3.15± 0.72	8¥ .00

*Mann-Whitney U test, ¥Independent samples t-test, X Kruskal-Wallis H test, ™One-Way Analysis of Variance (ANOVA), P<.05: Significant at level.

While there was a weak negative relationship between students' fear of infection contagion/transmission and their positive attitude toward the COVID-19 vaccine ($r = -.33$, $P < .01$), no significant relationship was found with a negative attitude. No significant relationship was discovered between fear of contact transmission, one of the sub-dimensions of the fear of infection contagion/transmission scale, and the sub-dimensions of the attitude towards the COVID-19 vaccine scale. There was a weak negative relationship between the virtual fear of contact transmission sub-dimension and both the positive and negative sub-dimensions of the attitude towards COVID-19 vaccination scale ($r = -.30$, $P < .01$; $r = -.12$, $P < .05$, respectively). There was a weak negative relationship between both the fear of social transmission sub-dimension and the fear of healthcare transmission sub-dimension and positive attitude towards the COVID-19 vaccine ($r = -.27$, $P < .01$; $r = -.27$, $P < .05$, respectively) (Table 4).

DISCUSSION

The positive attitude of students at risk of COVID-19 infection towards COVID-19 vaccination is critical in protecting from the disease and preventing complications that may develop. For this reason, the study was conducted with health science students, one of the groups most likely to encounter infectious diseases.

When reviewing the literature, there are studies showing that gender is not a risk factor for fear of COVID-19;¹²⁻¹⁴ however, many studies are showing that the level of fear of COVID-19 is higher in women compared to men.¹⁵⁻¹⁶ The systematic review (twenty-two studies) that examined the effects of COVID-19 on students reported that levels of fear were higher in females.³ While the higher number of female participants in the study may be one reason, this finding may be related to the fact that women are more emotionally impressionable and can express their fears more easily than men.

Table 4. Relationship Between Students' Fear of Infection Contagion/Transmission and Their Attitudes Toward COVID-19 Vaccination (N=303)

		Fear of Contagion/Transmission Scale					ATV- COVID-19 Scale	
		Fear of Contact Transmission	Fear of Virtual Transmission	Fear of Social Transmission	Fear of Healthcare Transmission	Total Score	Positive Attitude	Negative Attitude
Fear of Contagion/ Transmission Scale	Fear of Contact Transmission	r	1					
	Fear of Virtual Transmission	r	.44*	1				
	Fear of Social Transmission	r	.39*	.43*	1			
	Fear of Healthcare Transmission	r	.44*	.53*	.53*	1		
	Total Score	r	.67*	.77*	.82*	.80*	1	
ATV-COVID-19 Scale	Positive Attitude	r	-.11	-.30*	-.27*	-.27*	-.33*	1
	Negative Attitude	r	-.02	-.12**	-.03	-.10	-.09	-.38*

r: Spearman Correlation, Pearson Correlation * $P < .01$, * $P < .05$: Significant at Level, ATV-COVID-19: Attitudes Towards the COVID-19 Vaccine

In addition to the physical effects of the COVID-19 pandemic, it is known to affect individuals psychologically and socially. As each individual's thoughts, behaviors, and attitudes toward the disease vary, their levels of fear and anxiety may also vary.^{4-5,17} A certain level of fear is useful for coping, but when it is higher than the actual threat, it coerces individuals.¹⁸ While Çavmak et al. determined university students' COVID-19 fear/anxiety levels to be low in their study,¹⁹ Duman et al. found them to be moderate.¹³ Okuyan et al. (2020) found that the anxiety level of nursing students was high due to fear of contracting the virus and death.⁵ In this study, students were found to have a high level of fear of infection contagion/transmission (89.38±14.58); the sub-dimension "fear of social transmission" received the highest score. Notably, students were more afraid of transmission from the social environment than from the health environment, which is the most likely environment to encounter the infectious agent—this may be related to the frequent use of personal protective equipment (mask, gloves, goggles, etc.) during clinical practice. In addition, especially considering the age range of the participant group, this may be due to the fact that they are more likely to be in social settings and the thought that other individuals in the environment may not have the same sensitivity in terms of protection from infection or transmission of infection.

The decision to vaccinate can be influenced by many factors and can change over time.²⁰ Therefore, the individual's willingness to accept vaccination is not static. Willingness to be vaccinated is highly sensitive to current knowledge and feelings about the COVID-19 vaccine, as well as the state of the pandemic and the perceived risk of contracting the disease.²¹ Çağatay et al. (2022) highlighted that healthcare students have positive attitudes toward the COVID-19 vaccine.¹² Further, a low negative correlation was reported between fear of COVID-19 and attitudes toward vaccination. Similar studies revealed that students have positive attitudes toward the COVID-19 vaccine.¹⁹⁻²² Cao et al. (2020) reported that being infected with the virus and the fear of

infecting their immediate environment were effective in their decision during the vaccination.¹⁴ In this study, students' fear of infection contagion/transmission was associated with positive attitudes toward vaccination.

Study Limitations

The limitations of the study are the small sample size and the presence of selection bias due to the use of questionnaires in the study.

CONCLUSION

This study found that health science students have a high level of fear of infection contagion/transmission. According to these results, it can be suggested that the fear of infection contagion/transmission motivates students to take measures to be vaccinated against COVID-19.

Ethics Committee Approval: Ethics committee approval was received for this study from the ethics committee of Istanbul Culture University (Date: 14.10.2022, Number: 2022.139).

Informed Consent: Participant consent was obtained from all participants in this study.

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Author Contributions: Concept – ST, OT; Design - ST, OT; Supervision - ST, OT; Resources - ST, OT; Materials - ST, OT; Data Collection and/or Processing - ST, OT; Analysis and/or Interpretation - ST, OT; Literature Search - ST, OT; Writing Manuscript - ST, OT; Critical Review - ST, OT; Other - ST, OT

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REFERENCES

1. Görak G, Savaşer S, Yıldız S. Bulaşıcı Hastalıklar Hemşireliği. (Eds) Nobel Tıp Kitabevleri, İstanbul, 2021.
2. Koç A, Bilgehan T. Fear of contagion/ transmission scale: A study of scale development. *Turk. Stud. Assoc. J.* 2021;2(2):14-26.
3. Didin M, Yavuz B, Gezgin Yazıcı H. Effect of COVID-19 on students' stress, anxiety, depression and fear levels: systematic review. *Current Approaches in Psychiatry.* 2022;14(1):38-45.
4. Çubuk B. Coming with COVID-19 lost object, mourning and depression. *Yalova University Journal of Social Sciences.* 2020;10(21):90-99.
5. Okuyan CB, Karasu F, Polat F. The effect of COVID-19 on health anxiety levels of nursing students. *Van Health Sciences Journal.* 2020;13:45-52.
6. Zhang Y, Zhang H, Ma X, Di Q. Mental health problems during the COVID-19 pandemics and the mitigation effects of exercise: A longitudinal study of college students in China. *IJERPH.* 2020;17(10):3722.
7. Rachman SJ. Rachman Fear of Contamination: Evaluation and treatment. Oxford University Press, Oxford, 2006.
8. Yılmaz İH, Turğut B, Çıtlak G, et al. People's view of COVID-19 vaccine in Turkey. *Dicle Med J.* 2021;48(3):583-594.

9. Utma S. Health communication practices in fighting anti-vaccine: An assessment specific to the Covid19 output. *IJSHS*. 2021;7(43):1372-1383.
10. Farhud DD. Impact of lifestyle on health. *Iran J Public Health*. 2015;44(11):1442-1444.
11. Geniş B, Gürhan N, Koç M, Geniş Ç, Şirin B, Çırakoğlu OC, Coşar B. Development of perception and attitude scales related with COVID-19 pandemic. *Pearson Journal Of Social Sciences & Humanities*. 2020;5(7):306-326.
12. Çağatay HT, Başaran E, Salimoğlu S. Determination of the COVID-19 fear levels and their attitudes to the vaccine of health students. *USAYSAD*. 2022;8(1):51-61.
13. Duman N. COVID-19 fear and intolerance to uncertainty in university students. *J. Soc. Sci*. 2020;4(8):426-437.
14. Cao W, Fang Z, Hou G, et al. The psychological impact of the COVID-19 epidemic on college students in China. *Psychiatry Res*. 2020;287: 112934.
15. Qiu J, Shen B, Zhao M, Wang Z, Xie B, Xu Y. A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: implications and policy recommendations *Gen Psychiatr*. 2020;33(2):e100213.
16. Taylor S, Landry CA, Paluszek MM, Fergus TA, McKay D, Asmundson GJG. Covid stress syndrome: Concept, structure, and correlates. *Depression and Anxiety*. 2020;37(8):706-714.
17. Torales J, O'Higgins M, Castaldelli-Maia JM, Ventriglio A. The outbreak of COVID-19 coronavirus and its impact on global mental health. *Int. J. Soc. Psychiatry*. 2020;66(4):317–320.
18. Mertens G, Gerritsen L, Duijndam S, Salemink E, Engelhard IM. Fear of the coronavirus (COVID-19): Predictors in an online study conducted in March 2020. *J. Anxiety Disord*. 2020;74(102258):1-8.
19. Çavmak Ş, Atalay E, Gök B. Investigation of factors affecting Covid-19 vaccine attitude in university students. *Çağ University Journal of Social Sciences*. 2022;19(1):53-65.
20. Lazarus JV, Ratzan SC, Palayew A, et al. A global survey of potential acceptance of a COVID-19 vaccine. *Nat. Med*. 2021;27(2): 225–228.
21. Loomba S, de Figueiredo A, Piatek SJ, de Graaf K, Larson HJ. Measuring the impact of COVID-19 vaccine misinformation on vaccination intent in the UK and USA. *Nat. Hum. Behav*. 2021;5(3):337–348.
22. Demir Uslu Y, Yılmaz E, Altun U. Evaluation of health management and human resources management students' perceptions and attitudes towards the control and vaccine of COVID-19. *GUJHS*. 2021;10(3):383-397.