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The Relationship of The Effect of COVID-19 on Mental Health with Cyberchondria and Vaccine Hesitation: A Health-Themed University Sample

COVID-19'un Ruh Sağlığı Üzerindeki Etkisinin Siberkondri ve Aşı Tereddütü ile İlişkisi: Sağlık Temalı Bir Üniversite Örneği

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Öz

Giriş ve Amaç: Sağlık bölümü öğrencilerinin sağlık bakım hizmetlerinin sunumundaki kritik rolleri düşünüldüğünde, yüklendikleri bu sorumluluk onların bilgiye erişim isteklerini artırarak ruhsal sağlıklarının olumsuz etkilenme riskini artırabilir. Ayrıca, ruhsal sağlığın etkilenmesi aşılara yönelik bakış açılarında değişimlere de yol açabilir. Bu çalışma ile Covid-19 pandemisinin sağlık öğrencilerinin ruh sağlığı üzerindeki etkisi ile siberkondri ve aşı tereddütü arasındaki ilişkiselliğin tespiti amaçlandı.

Gereç ve Yöntemler: Tanımlayıcı ve ilişkisel tipte yapılan bu çalışma, Türkiye'de tematik bir sağlık üniversitesinde öğrenim gören 421 öğrenciden oluşmaktadır. Çalışmanın verileri, Kişisel Bilgi Formu, Covid-19 Pandemisinin Ruhsal ve Psikosomatik Etkilerini Değerlendirme Ölçeği, Siberkondri Ciddiyet Ölçeği Kısa Formu ve Pandemilerde Aşı Tereddütü Ölçeği kullanılarak çevrimiçi olarak toplanmıştır. Veriler t testi, One-Way ANOVA, Pearson korelasyon testi ile regresyon analizlerine dayalı olarak değerlendirildi.

Bulgular: Katılımcıların cinsiyet, eğitim birimi, internet kullanım süresi, sağlıkla ilgili arama yapılan platform, aşılanma durumu ve aşı dozu değişkenleri ile ölçek ortalamaları arasında anlamlı farklar bulunmuştur. Covid-19 pandemisinin ruh sağlığı üzerindeki etkisi ile siberkondri arasında orta düzeyde pozitif korelasyon, aşı tereddütü arasında ise negatif ve zayıf korelasyon tespit edilmiştir. Covid-19 pandemisinin katılımcıların ruh sağlığı üzerindeki etkisinin siberkondri ciddiyetini açıklama oranı R^2=0.389 ve aşı tereddütünü açıklama oranı ise R^2=0.010 olarak hesaplanmıştır.

Sonuç: Covid-19 pandemisinin ruhsal sağlık üzerinde yarattığı etkinin sağlık bölümü öğrencilerinin siberkondri düzeylerinde %38,9'luk etki ile artışa neden olduğu, aşı tereddütü düzeylerinde ise %1'lik bir etki ile azalışa neden olduğu sonucuna ulaşılmıştır.

Anahtar kelimeler: Sağlık Bölümü Öğrencileri**,** Covid-19, Pandemi, Ruh Sağlığı, Siberkondri, Aşı Tereddütü.

Abstract

Aim; Considering the critical role of health major students in the provision of health care services, this responsibility may increase their desire for access to information and increase the risk of negative effects on their mental health. In addition, affecting mental health may also lead to changes in their perspectives on vaccines. This study aimed to determine the impact of the Covid-19 pandemic on the mental health of health major students and the correlation between cyberchondria and vaccine hesitancy.

Method; This descriptive and correlational study consisted of 421 students studying at a thematic health university in Türkiye. The data were collected online using the Personal Information Form, Evaluation of Mental and Psychosomatic Effects of the Covid-19 Pandemic Scale, Cyberchondria Severity Scale Short Form, and the Vaccine Hesitancy Scale in Pandemics. Data were evaluated based on t-test, One-Way ANOVA, Pearson correlation test and regression analysis.
Results; Significant differences were found between the participants' gender, educational unit, internet usage time, health-related search platform, vaccination status and vaccine dose received variables and scale averages. There was a moderate positive correlation between the impact of the Covid-19 pandemic on mental health and cyberchondria, and a negative and weak correlation between vaccine hesitancy. The rate of explaining the impact of the Covid-19 pandemic on participants' mental health on the severity of cyberchondria was R^2=0.389 and the rate of explaining vaccine hesitancy was R^2=0.010.
Conclusion; It was concluded that the impact of the Covid-19 pandemic on mental health caused an increase in the cyberchondria levels of health department students with an effect of 38.9%, and a decrease in vaccine hesitancy levels with an effect of 1%.
Keywords: Health Major Students, Covid-19, Pandemic, Mental Health, Cyberchondria, Vaccine Hesitation.

1. 1ntroduction

COVID-19 has been experienced as a situation that greatly affects individuals in their mental health (MH) as well as their physical health [1,2]. The pandemic has led to an increase in anxiety and stress levels of individuals along with uncertainty and fear. Social isolation, fear and anxiety have caused many people to struggle with depression [3]. Factors such as health anxiety, trauma and losses, sleep problems and economic uncertainties have also negatively affected MH [4]. During the pandemic process, with the continuous sharing of news, statistics and information about COVID-19, individuals' concerns about their health have increased and their fear of getting sick has increased. This has led to an increase in cyberchondria behaviour [5,6]. In the literature, it is stated that this situation may indicate cyberchondria, which is a health-seeking behavior due to the increase in health-related concerns [7]. It is thought that the uncertainties of the pandemic and constantly changing situations may increase such concerns [8].

Vaccines that emerged during the pandemic caused concerns among people about their safety and efficacy [9]. The rapid development of vaccines may have caused some people to distrust and hesitate about the vaccine. It is stated that this situation may occur as a result of the uncertainties brought by the pandemic and the spread of misinformation [10]. It is thought that increasing anxiety and fear in students studying in health departments during the pandemic process will pave the way for them to turn to cyberchondria behaviour [11].

In the COVID-19 pandemic (C-19P), continuous news flow, uncertainty, social isolation, and anxiety have negatively affected the MH of many people and caused them to be significantly concerned about their health [12]. This intense anxiety has led individuals to become more prone to perceive symptoms of health-related illnesses and to increase their behavior of searching for these symptoms online [4]. Information pollution or misinformation that may be encountered about pandemic and vaccines in the internet environment has caused vaccine hesitation in some individuals [13]. It is stated that this hesitation may affect the course of the pandemic and the immunisation process of the society [14].

Health major students are individuals who have chosen a health-related profession and will be at the forefront of health services after graduation [15]. In addition, since students studying in health-related departments have more health-related knowledge than the general population and are more exposed to health information due to their professions and their orientation towards health-related research during the pandemic period may cause them to face the risk of cyberchondria [16]. Health major students can be seen as role models in the society and can also guide the society with their attitudes towards vaccination [17]. They can also play an important role in combating the effects of the pandemic on MH by providing support to the community [2]. In this direction, it is thought that examining the mental effects of the pandemic on students studying in health departments and its relationship with cyberchondria and vaccine hesitancy will contribute to the literature.

2. Method

2.1. Place, type and time of the research

The descriptive and correlational study was carried out with students studying in the health departments of a thematic health university in Türkiye between September 2022 and May 2023.

2.2.Sample

The population of this study consisted of 5239 students studying at associate, undergraduate and graduate levels of a health-themed state university in the 2022-2023 academic year, and the sample consisted of 421 students voluntarily participated in the study using the universal sampling method.

Inclusion criteria; being over 18 years of age, being a health department student and voluntarily accepting to participate in the study. According to the sample calculation method developed by Yazıcıoğlu and Erdoğan [18], the sample taken for this study is adequate. In addition, according to the sampling calculation method with known population, it was calculated that it would be sufficient to reach at least 358 students. Measurement tools were sent to approximately 500 people. The study was finalized with 421 people who volunteered to participate (84.2% response rate). In this way, it can be said that 421 students included in the study have the ability to represent the universe.

2.3.Research Questions

1. Is there a significant difference between the sociodemographic information of health major students and the impact of C-19P on MH, cyberchondria severity (CS) level and vaccine hesitancy (VH) level?
2. Is there a significant relationship between the impact of the C-19P on MH and health major students' CS and VH?
3. Does the impact of the C-19P on MH have a significant predictive effect on health major students' CS and VH?

2.4.Data collection tools

"Personal Information Form", " Evaluation of Mental and Psychosomatic Effects of the Covid-19 Pandemic Scale", "Cyberchondria Severity Scale Short Form" and "Vaccine Hesitation Scale in Pandemics" were used.

2.4.1. Personal Information Form: It consists of seven questions that provide information about students' personal information, internet usage status, and vaccination status during the pandemic period.

2.4.2. Evaluation of Mental and Psychosomatic Effects of the Covid-19 Pandemic Scale (EMPECPS): A 5-point Likert scale, which was developed to evaluate the effects of coronavirus both physically and psychologically, is two sub-scale consisting of 18 items. When the scale is answered, a minimum score of 18 and a maximum score of 90 can be obtained. It has been observed that as the score increases, the psychological and psychosomatic effects of coronavirus have negative consequences on the individual. The Cronbach's alpha coefficient (α) was reported as 0.93 [19]. In this study, the total score of the scale was evaluated and α was calculated as 0.94.

2.4.3. Cyberchondria Severity Scale Short Form (CSS-SF): It is a measurement tool consisting of twelve items and four factors, with validity and reliability in a 5-point Likert structure [20]. It is a psychometric scale designed to measure cyberchondria, which is expressed as a kind of anxiety characterised by searching for more health information than necessary on the internet. The scale does not have a cut-off point. The total cyberchondria score of the individual is calculated with the sum of the scores obtained from each question. A high score explains a high level of cyberchondria. The α of CSS-SF was calculated as 0.83 [21]. In this study, the total score of the scale was evaluated and α was calculated as 0.90.

2.4.4. Vaccine Hesitation Scale in Pandemics (VHSP): This scale with 2 dimensions and ten items was developed by Larson et al. [22]. High scores indicate a high level of vaccine hesitancy. The α obtained as a result of the analysis of the reliability of the scale was determined as 0.90 [23]. In this study, the total score of the scale was evaluated and α was calculated as 0.88 for the whole scale.

2.5.Ethical Aspects of the Study

For the scales used in the study, permission was obtained from the authors who developed the scales and conducted the adaptation studies into Turkish. Ethical approval received from Kütahya Health Sciences University (number 2022/06-24 on 25.05.2022) and general permission was obtained from the rectorate for the implementation of the study. In this volunteer-based study, the online form sent to the students participating in the study, the purpose of the study was explained and they were asked to fill out the form after obtaining their informed consent. In addition, the ethical principles of the current Helsinki Declaration were adhered to during the study.

2.6.Analysing the Data

The evaluation of the data was performed with SPSS 25 package programme. Skewness and kurtosis coefficients were examined and values were found to be between -1.5/+1.5. This can be interpreted as a normal distribution of the data [24]. Since the data of the study showed normal distribution, descriptive statistical methods as well as t-test and One-Way ANOVA with Bonferroni test were applied. To detect the relationship between variables, Pearson correlation with linear regression analysis were also performed. Correlation coefficient evaluations were evaluated as very weak between 0.00-0.19, weak between 0.20-0.39, moderate between 0.40-0.69, strong between 0.70-0.89, very strong between 0.90-1.00 [25]. The evaluations of the results obtained were taken into consideration at $p<0.05$ and $p<0.01$ significance levels.

3. Result

In current study aimed to identify the effect of the C-19P on the MH of students studying in health departments in relation to cyberchondria and vaccine hesitancy. It was determined that 93.6% of the students were between the ages of 18-24 (mean=20.86±2.91) and 81.9% were female. It was

observed that 39.7% of the students were studying at the faculty of health sciences, 93.8% were vaccinated during the pandemic period, and 58.5% received two doses of vaccine. It was identified that 67.9% of the students used the internet more than 3 hours a day and 73.9% of them preferred both websites and social media platforms for health-related searches (Table 1).

Table 1. Sociodemographic information of health major students (n=421)

Variables	Group	n	%
Age (X±SD =20.86±2.91)	18-24	394	93.6
	25 and above	27	6.4
Gender	Female	345	81.9
	Male	76	18.1
Education Unit	Faculty of Medicine	65	15.4
	Faculty of Dentistry	37	8.8
	Faculty of Health Sciences	167	39.7
	Vocational School	124	29.5
	Institute of Graduate Studies	28	6.6
Vaccination Status	Yes	395	93.8
	No	26	6.2
Vaccine Dose Received (N=395)	One	28	7.1
	Two	231	58.5
	Three and above	136	34.4
Internet Usage Time	<1 Hour	12	2.9
	1-3 Hours	123	29.2
	>3 Hours	286	67.9
Platform for health-related searches	Only websites	49	11.6
	Only social media	61	14.5
	Websites and social media	311	73.9
X=Mean; SD=Standard deviation.			

When the scale score comparisons with the variables were evaluated, statistical significance was found between the EMPECPS and the variables of gender and the platform used to obtain information; between the CSS-SF and the variables of education unit and internet usage time; and between the VHSP and the variables of education unit, vaccination status and vaccination dose ($p<0.05$) (Table 2).

When the correlation analysis between the scales given in Table 3 was evaluated, it was found that there was a moderate positive correlation between EMPECPS and CSS-SF ($r=0.624$; $p<0.001$) and a low level negative correlation between EMPECPS and VHSP ($r=0.010$; $p<0.05$).

According to Table 4, it was determined that the effect of the C-19P on students' MH had a significant positive effect on the severity of cyberchondria ($\beta=0.624$; $F=266.805$; $p<0.001$). The ratio of the participants' EMPECPS score to explain the severity of cyberchondria was calculated as $R^2=0.389$. This value shows that 38.9% of the CS level is explained by the impact of the C-19P on students' MH. According to the results of the regression analysis with the other variable, it was found that the effect of the C-19P on MH had a significant negative effect on the level of VH ($\beta=-0.102$; $F=4.400$; $p<0.05$). The rate of explaining the VH of health major students' EMPECPS score was calculated as $R^2=0.010$. This value shows that 1% of the level of VH is explained by the impact of the C-19P on students' MH (Table 4).

Table 2. Personal information of health major students and scale score comparisons (n=421)

Variables	Group	n	%	EMPECPS	CSS-SF	VHSP
Age	18-24	394	93.6	47.54 ±16.57	33.94 ±10.06	27.53 ±8.75
	25 and above	27	6.4	44.92 ±18.21	35.33 ±13.21	27.44 ±9.45
	t test			t =0.790 p=0.430	t = -0.678 p=0.498	t =0.051 p=0.960
Gender	Female	345	81.9	49.32±15.98	34.42±10.02	27.55±8.59
	Male	76	18.1	38.56±16.96	32.25±11.26	27.38±9.66
	t test			t =4.431 **p < 0.001**	t =1.676 p=0.094	t =0.159 p=0.873
Education Unit	Faculty of Medicine	65	15.4	46.5±16.08	33.86±9.54	26.35±9.22
	Faculty of Dentistry	37	8.8	48.86±17.88	34.67±9.68	26.29±8.25
	Faculty of Health Sciences	167	39.7	46.35±16.31	32.77±10.01	27.44±8.69
	Vocational School	124	29.5	47.66±16.53	34.49±10.03	29.33±9.03
	Institute of Graduate Studies	28	6.6	52.25±19.09	39.07±13.78	24.35±6.45
	ANOVA test			F=0.880 p = 0.476	F=2.439 **p=0.013**	F=2.734 **p=0.049**
Vaccination Status	Yes	395	93.8	47.31 ±16.46	34.01 ±10.37	29.95 ±8.41
	No	26	6.2	48.3 ±19.9	34.42 ±8.88	36.19 ±9.97
	t test			t = -0.293 p=0.770	t = -0.198 p=0.843	t = -5.358 **p <0.001**
Vaccine Dose Received (n=395)	Only	28	7.1	44.85 ±12.36	33.39 ±8.79	30.78 ±7.72
	Two	231	58.5	46.78 ±17.35	33.71 ±10.64	27.8 ±8.33
	Three and above	136	34.4	48.72 ±16.5	34.63 ±10.23	24.73 ±8.18
	ANOVA test			F=0.931 p=0.395	F=0.384 p=0.681	F=9,170 **p <0.001**
Internet Usage Time	<1 Hour	12	2.9	42.5 ±17.74	25.16 ±10.1	31.0 ±11.11
	1-3 Hours	123	29.2	47.9 ±16.81	34.3 ±9.81	26.65 ±8.57
	>3 Hours	286	67.9	47.7 ±16.58	34.29 ±10.34	27.75 ±8.75
	ANOVA test			F=0.585 p=0.395	F=4.678 **p=0.010**	F=1.653 p=0.193
Platform for health-related searches	Only websites	49	11.6	45.14±18.94	34.34±11.46	28.87±9.97
	Only social media	61	14.5	52.11±18.75	33.9±12.84	28.19±8.82
	Websites and social media	311	73.9	46.8±15.72	34.01±9.53	27.18±8.58
	ANOVA test			F=3.119 **p=0.045**	F=0.028 p=0.972	F=0.993 p=0.371

EMPECPS: *Evaluation of Mental and Psychosomatic Effects of the Covid-19 Pandemic Scale;* CSS-SF: *Cyberchondria Severity Scale Short Form;* VHSP: *Vaccine Hesitation Scale in Pandemics*

Table 3. Correlation between the scores of the scales (n=421)

		EMPECPS	CSS-SF	VHSP
EMPECPS	r	-		
CSS-SF	r	.624 **	-	
VHSP	r	-.102 *	-.086	-

EMPECPS: *Evaluation of Mental and Psychosomatic Effects of the Covid-19 Pandemic Scale;* CSS-SF: *Cyberchondria Severity Scale Short Form;* VHSP: *Vaccine Hesitation Scale in Pandemics* *p<0.05**p< 0.01

Table 4. Regression results to detect the effect of C-19P on MH on cyberchondria and vaccine hesitancy (n=421)

Dependent variable	Independent variable	B.	Std.Error	β	t	R^2	F	p
CSS-SF	Constant	15,812	1,183					
	EMPECPS	0.385	0.024	0.624	16,334	0.389	266,805	0.000
VHSP	Constant	30,074	1,287					
	EMPECPS	-0.054	0.026	-0.102	-2.098	0.010	4,400	0.037

EMPECPS: *Evaluation of Mental and Psychosomatic Effects of the Covid-19 Pandemic Scale;* CSS-SF: *Cyberchondria Severity Scale Short Form;* VHSP: *Vaccine Hesitation Scale in Pandemics*

4. Discussion

In this study, which made to explain the relationship between the mental effects of the C-19P on health major students and cyberchondria and vaccine hesitancy, it was observed that the pandemic affected the MH of female students more than male students. In line with our study, previous works also report that the mental effects of the pandemic are reported by women more than men and are associated with female gender [26-32]. On the other hand, it is among our study findings that the participants' preference for social media to obtain information during the Covid-19 process causes effects on MH. Similar to this study, it has been reported that social media has psychological effects during Covid-19, increases anxiety, suicidal ideation, depression and stress states of individuals compared to before the pandemic, and causes a sense of panic in individuals by creating an environment of fear [33-36].

When the significance between the unit of education and CS levels was evaluated, it was determined that this was due to health major students who received postgraduate education. In previous studies, CS scores of medical faculty and health sciences-nursing faculty students were found to be higher than other faculties scores [37-38]. In contrast to our findings, in a study, it was reported that health literacy increased with increasing education level and thus the level of cyberchondria decreased [39]. In this study, the fact that postgraduate students had the highest mean score in terms of CS score may suggest that they have more in-depth research skills on the relevant subject because they receive more advanced education on health and disease issues, which may have led them to search for health information on the internet more. It was found that students who used the internet for 1-3 hours and more than 3 hours had higher cyberchondria levels than those who used the internet for less than 1 hour. In line with the current study, Ertaş et al. [40] and Tuna et al. [37] determined that there was a positive correlation between daily time spent on the internet and cyberchondria level.

In addition, in another study on cyberchondria conducted with university students, the cyberchondria levels of university students were found to be high and it was stated that those who use the internet more than 3 hours a day have more cyberchondria behaviours compared to those who do not [41]. In contrast to the results of this study, Göde and Öztürk [42] reported that they did not detect a statistical significance between the time spent on the internet and cyberchondria in their study. The Internet provides fast and easy access to all kinds of health-related information and allows individuals to share their health status through social media platforms. At the same time, individuals may be exposed to other individuals' posts on social media, including their health concerns. This may trigger students' concerns about their own health status by searching too much about any sign or symptom. Long hours spent on social media and health-related websites may increase students' stress levels. Stress may increase the risk of cyberchondria and cause the person to have more health concerns than normal [43]. In a study, it was reported that social media users had higher cyberchondria levels compared to non-users [39]. As the time spent on the internet increases, it can be thought that there will be an increase in health information seeking behaviours and this will lead to an increase in health-related anxiety.

Since the day Covid-19 vaccine studies started, many people have question marks in their minds, whether they are vaccinated or not. In addition, as time progresses, these question marks can turn into positive or negative attitudes [9]. In our study, it was detected that the VH scores of vocational school students studying at the associate degree level were significantly higher. In addition, it was found that the mean VH scores of students who did not receive vaccination were higher, and it was determined that the hesitation towards vaccination decreased as the vaccine dose increased. Çetin et al. [44] examined VH with 1559 students studying in health sciences in their study and stated that VH showed a significant difference according to the level of education and that less years of education caused VH by reducing confidence in vaccines. In another study, it was reported that not trusting the content of the vaccine played a role in vaccine hesitation [9]. In the results of other studies conducted with nursing students, it was reported that not trusting the vaccine, its side effects and the production process are among the reasons that cause vaccine hesitation [45-46]. It can be said that the participants in the study exhibited an inquisitive attitude and an approach to have more detailed information about vaccines because they were health department students. It is thought that the reason why those who experience hesitation do not get vaccinated and those who get vaccinated decrease their vaccination hesitation as the dose of vaccination increases may be the reasons such as confidence in the vaccine and the fact that those who do not get vaccinated get sick. Considering that university students constitute a significant part of the society, it can be thought that this issue may be effective in the hesitation towards vaccination in the future and in the planning and maintenance of vaccination policies. In addition, the high amount of time students spend on the internet daily may cause them to be exposed to misinformation and conspiracy theories spread about vaccines on platforms such as the internet and social media [47]. Students' exposure to this information pollution may have caused them to hesitate about the reliability of vaccines.

Studies have associated newly produced and administered vaccines in the pandemic with vaccine hesitation and psychiatric symptoms in users [48]. In the current study, it was determined that the effects of the C-19P on MH were positively associated with students' cyberchondria levels. Doğanyiğit and Keçeligil [5] found that health-related anxiety during the pandemic was positively related to cyberchondria behaviours. The unpredictable size of the impact area of pandemics and the inability to be based on concrete reasons create stress on individuals and bring intense psychological threats [49]. The C-19P has also triggered the emergence of many mental problems such as stress, anxiety and depression [50-51]. It can be said that these mental problems caused individuals to develop cyberchondria behaviour and the psychiatric effects of the pandemic on individuals caused individuals to experience serious anxiety about their health. It is thought that increased anxiety may cause individuals to do more research on possible symptoms on the internet. It can be said that this situation leads to an increase in information-seeking behaviours by pushing the individual to seek excessive reassurance through the internet. Cyberchondria is basically seen as a problem that arises as a result of the reinforcement of anxiety with the behaviours shown in reducing the stress on health [5].

Previous studies indicate that psychiatric disorders experienced in pandemics are significantly positively associated with VH and that existing beliefs about vaccines cause hesitation towards vaccination [52-53]. However, in the current study, it was found that 1% of VH was predicted by the effects of the C-19P on MH in a negatively correlated manner. It can be thought that this result may be due to the fear, anxiety and stress caused by the pandemic in individuals, and from this point of view, individuals may tend to turn to vaccination by reducing their hesitation in order to cope with these feelings and protect themselves from the disease. It can also be said that the existence of a widespread fear of getting sick in the society increases the acceptability of vaccination [54]. It is important that pandemic-induced psychiatric disorders that may occur in individuals are evaluated by MH professionals and necessary measures are taken.

4.1. Strengths and limitations

This study contributes to the literature on the effects of Covid-19 on mental health and its effect on cyberchondria and vaccine hesitancy. It also provides supportive results for interventions to be planned to protect the mental health of students, who will be the health professionals of the future, in similar global crises. In addition to its strengths, the study also has some limitations. The students included in this study are cross-sectional, covering only one university student in a single region. Therefore, the results may vary in different regions. On the other hand, only students studying in health departments were included in this study. It is recommended to compare the results in larger samples including non-health major students.

5. Conclusion

The mental effects of C-19P were found to positively explain the level of cyberchondria and negatively explain vaccine hesitancy in students. The C-19P caused an increase in various psychiatric symptoms such as increased stress, anxiety, fear, sense of uncertainty and social isolation in students. This situation caused students to have increased health concerns and to search for disease symptoms on the internet more than usual. On the other hand, the psychological effects caused by the pandemic caused students to hesitate about the effects, safety and side effects of the vaccine. It is important to know these effects, to determine the emotional and psychological needs of students after the pandemic and in similar situations that may be encountered in the long term, and to plan appropriate support programmes. It is deemed essential to determine the psychosocial indicators of students after the pandemic in a larger sample and to plan psychotherapeutic interventions for these effects.

6. Acknowledgement

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