Original Article

Impact of Clinical Practice and Individual Characteristics On Nursing Students' COVID-19 Phobia

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Abstract

Background: Coronaphobia, is an excessive anxiety or fear of becoming infected by virus, which causes behavioral disorders by ensuring the impairment of daily life of the individual. It is thought that the clinical trainings carried out during the covid period will increase the coronaphobia of the nursing students and affect the care they give to the patients. Therefore, there is a need to studies to understand students' coronaphobia level and factors affecting it.

Aim: This study examines the COVID-19 phobia that nursing students experience during their clinical practice education and the factors affecting it.

Methods: This was a descriptive and cross-sectional study carried out with 321 second, third and fourth-year nursing students recruited from a nursing school in Turkey. Data were collected via questionnaire. A multiple linear regression analysis was used to examine the relationship between participant's characteristics and coronaphobia levels.

Results: The students had a moderate level of coronaphobia. The state of being infected with COVID-19, death of a relative or acquaintance due to COVID-19, being afraid to be infected with COVID-19, being fearful of caregiving for COVID-19 patients, and anxiety when using common areas were associated with higher levels of phobia.

Conclusion: Strategies and programs aimed at reducing nursing students' coronaphobia levels, and improving psychological support within the nursing curriculum should be implemented to help students effectively express their feelings and coping with stress.

Keywords: COVID-19, phobia**,** nursing students, clinical practice

Introduction

Coronavirus disease-2019 (COVID-19), which caused the greatest international health crisis of our age, is the most critical turning point in the last millennium of human civilization (Jones, 2020). Until today, COVID-19 infected millions of people and claimed the lives of millions worldwide (WHO, 2022). The cases and deaths associated with this large number of COVID 19 and the issues related to the pandemic situation were addressed on television, radio, and social media (Wang et al., 2021; Pan American Health Organization, 2020). These losses and news caused mental health issues such as fear, anxiety, and depression associated with the outbreak globally (Wang et al., 2020). Coronaphobia was one of these mental health problems (Leng et al., 2021).

The phenomenon of coronaphobia, which entered our lives with the COVID-19 pandemic, is a state of excessive anxiety or fear that the individual cannot control, which causes behavioral disorders

by ensuring the impairment of daily life of the individual due to coronavirus (Leng et al., 2021). This phenomenon has three main components. The first of these is the physiological component and includes symptoms such as difficulty breathing and sleeping in response to the fear felt by the individual. The second is the cognitive component and includes the emotional stress and responses triggered by the pandemic. These emotions include fear of death in case of contracting the virus, fear of infecting the family with the virus, guilt, and anger. The behavioral component, which includes the behaviors adopted to prevent contamination with the virus, is in the third place. This component includes the adoption of safe health-related behaviors such as avoiding touching objects, not using public transport, being in open places, avoiding contact with potentially contagious people, frequent hand washing, and constantly checking for signs and symptoms (Arora et al., 2020).

Nursing is a practice-based discipline, therefore nursing education consists of theoretical and clinical education. Clinical education provides students with the opportunity to put their theoretical knowledge into practice, provides professional socialization and the acquisition of professional values, and thus enables students to reach professional competence (Admi et al., 2018; Ahmed & Mohammed, 2019). The COVID-19 epidemic adversely affected human life and led to significant challenges in the social, political, and economic areas. Education is another area affected. With the first notification of COVID-19 cases, higher education institutions were temporarily closed to reduce the spread, face-to-face education was suspended including applied disciplines (Aslan & Pekinci, 2020). Nursing education, which is an applied discipline, was also affected by the pandemic process, and theoretical and clinical training was conducted online to ensure the safety of students. However, the need for nurses has increased globally during the pandemic process. For this reason, nursing schools figured out strategies to ensure that students have clinical experience in this process and graduate students on time (Susmarini et al., 2022). For this reason, the clinical training, which was tried to be compensated by distance education in the first half of the pandemic process in our country, was planned and implemented in clinics after the decision that applied training divided into groups in the spring semester of 2021, provided that maximum attention and strict measures were taken for students (YÖK, 2021). Thus, students gained competence by participating in patient care management during the pandemic process. In this process, students struggled with difficulties in clinical education, experienced fear of being infected with COVID-19 and fear of infecting their families, and faced situations such as the inability to communicate with relatives (Lee & Ahn, 2020). During the COVID-19 pandemic, some countries, such as Spain and England, invited senior nursing students to join the nursing workforce in hospitals voluntarily, and these volunteer students stated that they experienced anxiety, fear, sadness, and uncertainty after starting the job (Martin-Delgado et al., 2021; Casafont at al., 2021).

Many studies in the literature took into account the emotions experienced such as fear, stress, and anxiety by nursing students during their clinical training in the pandemic process (Taylor et al., 2020; Aslan & Pekince, 2021; De Los Santoset al., 2021; Ulenaers et al.,2021). Based on the literature, it is logical to assume that coronaphobia levels of nursing students may increase during their clinical training and taking part in patient care. However, no studies were found examining the COVID-19 phobia of nursing students and its affecting factors. This research provides data to create information about the COVID-19 phobia that students experience during their clinical practice education and the factors affecting it. Results of the study will assist nursing educators and academics in emergency/pandemic situations in managing students' emotions during their clinical training and figuring out new educational strategies.

Methods

Study design and sample

This is a descriptive and cross-sectional study carried out with second, third and fourth grades of the nursing department of faculty of health sciences of a university in Turkey. Data were collected between March and July 2021 through an online survey. The STROBE cross-sectional reporting guidelines were used. The data were collected using free online form creator (the Google forms), which enabled the rapid and effective distribution of an online questionnaire to students. The G*Power (3.1.9.4) computer program was used to determine the power analysis of the sample (Faul et al., 2007). The sample size was determined as 90 with a medium effect size (Cohen's f2 = 0.15), 0.05 level of error with a 95%

confidence interval, 95% power and 16 of predictors according to the lineear multiple regression statistical power analysis, and the study was conducted with 321 students who agreed to participate. Inclusion criteria involved: The nursing students (1) were aged 18 years or older, (2) were willing to participate in this study, (3) filled out complete questionnaire forms and (4) students were in hospital practice.

Data collection tool: The data were collected using the "students' information form" was prepared by the researchers and the "COVID-19 Phobia Scale (C19P-S)". Students' information form was prepared by the researchers based on the literatüre (Aslan & Pekince, 2021; Rahman, 2021; Ulenaers et al.,2021) and consisted of questions, such as students' age, gender, residence place, state of having a chronic disease, state of positive COVID-19 diagnosis, state of relative or acquaintance with COVID-19 diagnosis, state of death of a relative or acquaintance due to COVID-19, afraid to be infected with COVID-19, afraid of caregiving for COVID-19 patients, the fear of not being able to maintain social distance in the hospital environment.

COVID-19 Phobia Scale (C19P-S): COVID-19 Phobia Scale (C19P-S) that was developed by Arpaci et al. (2020) consists of 20 items. Responses were made on a five-point likert-type ("strongly disagree (1)" to "strongly agree (5). The scale has four sub-dimensions, "Psychological factors", "Psycho-somatic factors", "Economic factors" and "Social factors". The scores on the scale can range between 20 and 100 and a higher score indicates a greater phobia in the respected subscales and total scale. In the study of Arpaci, Karataş and Baloğlu (2020) reliability study, the internal consistency coefficient of the scale was found to be $\alpha = 0.925$ and in our study, it was found to be $\alpha = 0.924$.

Data analysis: The data were analysed using the IBM SPSS 26.0 (Statistical Package for Social Sciences 26.0) package program. First, the fit of the data to a normal distribution was examined by the one-sample Kolmogorov–Smirnov test. The number and percentage distribution were used in the evaluation of categorical data and mean-standard deviation was used in the evaluation of continuous data. Then, multiple linear regression analysis was used in order to define descriptive variables in the COVID-19 Phobia Scale. Before performing regression analysis, a strong linear dependence among the independent variables was checked in order to multicollinearity by using the Variance Inflation Factor (VIF). Giacalone et al. (2018) reported that VIF should be under 10. In the current study, VIF was found to be 1.034-1.692, which indicates that there no multicollinearity problem. $p < 0.05$ was considered significant in this study.

Ethical Approval: Ethical approval of this study was obtained by the Scientific Research Ethics Committee of an university (TÜTF-BAEK 2021/238, Approval no: 11/2). The purpose and procedure of the study was explained to students who voluntarily participated in the study. Their informed consent was obtained by using the Informed Consent Form.

Results

Characteristics of students: The descriptive characteristics of the student are presented in Table 1. In the study, nursing students had a mean age of 20.73 years (SD= 1.73). Female participants constituted 82.2% of the study group, and 17.8% of the participants were male. Among the participants, 53.6 % lived with their friends. Most (91.6%) participants did not have a chronic disease. A total of 80.7% reported that they had not been infected with COVID-19, 71.3% reported that a relative or acquaintance had been infected with COVID-19, and 18.7% reported that a relative or acquaintance died due to COVID-19. 62.0% of the students stated that they were afraid to be infected with COVID-19, and 71.3% stated that afraid of caregiving for COVID-19 patients. %74.8 of the students had fear of not being able to maintain social distance in the hospital environment and 83.8% had anxiety when using common areas (toilets, elevators etc…).

C19P-S Total Score and Sub-dimension Score Averages: The mean total score and sub-dimension scores of the C19P-S are presented in Table 2. In the study, the mean psychological factors sub-scale score of the participants was found as 17.94±5.12, the psycho-somatic factors sub-scale score was found as 8.99±3.37, the economic factors sub-scale score was found as 7.85±2.67 and social factors sub-scale score was found as 13.06±3.99. C19P-S mean total score of the participants was found as 47.85±12.87.

The Effects of Characteristics of Students on COVID-19 Phobia: When we examined the effects of the students' socio-demographic and disease-related characteristics on COVID-19 Phobia, among characteristic variables state of

positive COVID-19 diagnosis (p< .05; B: 3.491), state of death of a relative or acquaintance due to COVID-19 (p< .05; B: 3.199), afraid to be infected with COVID-19 (p<.001; B: 5.225), the afraid of caregiving for COVID-19 patients (p< .01; B: 5.056), state of fear of not being able to maintain social distance in the hospital environment (p<.05; B: 3.399), and state of anxiety when using common areas (toilets, elevators etc…) (p< .01; B: 6.087) were found to be factors effected to COVID-19 phobia.

Table 1. Socio-Demographic Characteristics of the Participants (n: 321)

Variables	n	%
Age (years)		
Mean±SD= 20.73±1.73	-	-
Gender		
Female	264	82.2
Male	57	17.8
Residence Place		
With family	149	46.4
With friends	172	53.6
State of having chronic disease		
Yes	27	8.4
No	294	91.6
State of positive COVID-19 diagnosis		
Yes	62	19.3
No	259	80.7
State of relative or acquaintance with COVID-19 diagnosis		
Yes	92	28.7
No	229	71.3
State of death of a relative or acquaintance due to COVID-19		
Yes	60	18.7
No	261	81.3
Afraid to be infected with COVID-19		
Yes	199	62.0
No	122	38.0
Afraid of caregiving for COVID-19 patients		
Yes	229	71.3
No	92	28.7
The fear of not being able to maintain social distance in the hospital environment		

Yes	240	74.8
No	81	25.2
State of anxiety when using common areas (toilets, elevators etc…).		
Yes	269	83.8
No	51	15.9

Table 2. Mean Total Score and Sub-Dimension Scores of the C19P-S (n= 321)

	X±SD	Min-Max
Psychological factors	17.94±5.12	6-30
Psycho-somatic factors	8.99±3.37	5-21
Economic factors	7.85±2.67	4-19
Social factors	13.06±3.99	5-25
COVID-19 Phobia Scale (total)	47.85±12.87	20-80

Table 3. Regression model of COVID-19 Phobia (n= 321)

Predictor variables		Unstandardized Coefficients		Standardized Coefficients		p	95.0%Confidence Interval for B	
		B	Std. Error	βeta	t		Lower Bound	Upper Bound
State of positive COVID-19 diagnosis	**0:** No **1:** Yes	3.491	1.493	.107	2.338	.020	.554	6.428
State of death of a relative or acquaintance due to COVID-19	**0:** No **1:** Yes	3.199	1.502	.097	2.129	.034	.243	6.154
Afraid to be infected with COVID-19	**0:** No **1:** Yes	5.225	1.441	.197	3.627	.000	2.390	8.059
Afraid of caregiving for COVID-19 patients	**0:** No **1:** Yes	5.056	1.657	.178	3.052	.002	1.796	8.315
Fear of not being able to maintain social distance in the hospital environment	**0:** No **1:** Yes	3.399	1.518	.115	2.239	.026	.412	6.387
State of anxiety when using common areas (toilets, elevators etc…).	**0:** No **1:** Yes	6.087	1.812	.176	3.359	.001	2.521	9.653

Backward method, multiple regression analysis* Adjusted R^2= 0.358

Abbreviation: B= coefficient B; βeta= standardised beta coefficient; R^2= R-square (the coefficient of determination); Std= standard

Discussion

With the COVID-19 pandemic, the nursing profession has proven once again that it is an indispensable part of the health system all over the world. Nurses, who were at the frontline of the fight against the epidemic, while coping with the intense working conditions, faced high risks of infection, long working hours, insomnia, working in unsafe conditions, and coped with psychological problems such as fear, anxiety, and depression (Chew et al., 2020). During this pandemic, nursing students, who are the nurses of the future, also experienced negative emotions such as phobia, anxiety, depression, and hopelessness during their clinical training, and their psychology was adversely affected (Casafont et al.,2021). In this study, it was aimed to examine the COVID-19 phobia that students experience during their clinical practice education and the factors affecting it during the pandemic process.

Coronaphobia is an excessive level of anxiety or fear that causes behavioral disorders in the individual during the pandemic process (Leng et al., 2021). Studies show that the COVID-19 pandemic affects nursing students in many ways, such as choosing between their safety and patient safety (Eweida ve ark., 2020), fear of being infected with the virüs (Taylor et al., 2020), and experiencing anxiety (De Los Santos et al., 2021). In the study of Ulenaers et al. (2021), nursing students reported that clinical practice during the COVID-19 epidemic was more challenging than usual, and being in this clinical practice felt more stressful, unsafe, emotional, overwhelming, and heavy, and students needed psychosocial support while working in clinics.

In the study conducted by Rahman (2021) to determine the COVID-19 phobia level of medical school students, the total score of the students' COVID-19 phobia scale was 47.09, the study of Delibaş (2021) reported that this value is 49.90, and in the study of Tercan (2021), the mean score of the COVID-19 Phobia Scale of emergency and disaster management students is 51.63.In this study, the mean score of the COVID-19 phobia psychological factors sub-scale score of the participants was found as 17.94±5.12, the psycho-somatic factors sub-scale score was found as 8.99±3.37, the economic factors sub-scale score was found as 7.85±2.67 and social factors sub-scale score was found as 13.06±3.99. C19P-S mean total score of the participants was found as 47.85±12.87. Considering that the maximum score that can be obtained from the scale is 100, it can be said that the level of COVID-19 phobia of the students is moderate according to this value.

While COVID-19 caused physical problems such as fever, cough, and shortness of breath, it also affected the psychology of individuals. During the pandemic process, anxiety levels increased with the development of negative emotions in patients infected with COVID-19. (Curşeu et al., 2021). In the study conducted by Roldán- Merino et al. (2022) to determine the psychological effects of the COVID-19 pandemic on nursing students, it was reported that the anxiety level of students showing COVID-19 symptoms was higher than those who did not show symptoms. In the study conducted by Dörttepe et al. (2021), it is reported that the perceived COVID-19 phobia levels are significantly higher in participants diagnosed with COVID-19. In this study, the status of infected with COVID-19 previously was determined to be an affecting factor of COVID-19 phobia, and the COVID-19 phobia levels of students who were previously infected with COVID-19 were found to be significantly higher than those who were not infected. This result suggests that the symptoms experienced by students who had COVID-19 and the sense of loneliness they experienced in quarantine caused an increase in the level of COVID-19 phobia.

COVID-19 has caused many deaths worldwide, and many individuals have lost their relatives due to COVID-19. In the studies conducted by Jardon and Choi (2022) and Roldán- Merino et al. (2022) with nursing students, it is stated that there is no significant difference between the students' loss of a family member or friend due to COVID-19 and their anxiety. In this study, contrary to the literature, it was found that the state of death of a relative or acquaintance due to COVID-19 was determined to be an affecting factor of COVID-19 phobia, and the COVID-19 phobia level of nursing students who had a relative or acquaintance who died from COVID-19 was higher than those who did not have a relative or acquaintance who died from COVID-19. In this respect, it can be said that the participants who have a relative or acquaintance who died from COVID-19 caused an increase in COVID phobias as a result of the fact that their relatives did not have a good death process and experienced that they were alone during this death process.

In the COVID-19 pandemic, it is stated that nursing students have a very high risk of contracting and transmitting the virus during clinical practice (Ogolodom et al.,2020). In the study of Roldán- Merino et al. (2022), it was reported that the anxiety level of students who are afraid of being infected with COVID-19 is higher than those who are not afraid. In the study by Ulenaers et al. (2021), it was reported that although most the nursing students (67.07%) do not actively participate in the care of COVID-19 patients, they have a high level of fear of being infected, and this fear increases if the students are involved in the care of COVID-19 patients. In the study of Susmarini et al. (2022), it was reported that all nursing students participating in the study experienced anxiety during clinical practice and were more afraid of being infected with COVID-19. In the study conducted by Aslan and Pekince (2021) with Turkish nursing students, it was determined that the students experienced anxiety about being infected with the virus and that anxiety affected their stress levels. In this current study, which is similar to the literature, it was found that 62% of the participants were afraid of being infected with COVID-19 and the state of afraid of being infected with virus was determined to be an affecting factor of COVID-19 phobia. State of afraid to be infected with COVID-19 the level of COVID-19 phobia of students who were afraid of being infected with COVID-19 was higher than those who were not afraid. The literature on the COVID-19 pandemic shows that nursing students describe clinics as high-risk, do not feel safe, and are worried about becoming infected while working with patients (Collado-Boira et al., 2020). In the study conducted by Cervera-Gasch et al. (2020), it was determined that 65.3% of nursing and medical students did not feel ready to participate in the care of patients diagnosed with COVID-19, and 38.9% were afraid of being infected during care. In this study, it was similar to the literature, and it was found that 71.3% of the participants were afraid to care for patients infected with COVID-19, and the level of COVID-19 phobia of students who were afraid of caring for patients infected with COVID-19 was higher than those who were not afraid.During the COVID-19 pandemic process, countries have released a package of measures to stop the spread of COVID-19. These packages included measures such as a ban on going out, maintaining social distance, and the obligation to wear masks (Cervera-Gasch et al., 2020). In the study by Eweida et al. (2020), it is reported that nursing students thought the use of protective equipment and the publication of clear guidelines for infection prevention was extremely effective in reducing their stress. Tülüce and Serin (2022), in their study with nursing students, reported that students protect themselves with personal hygiene and isolation methods during the pandemic process, most of them do not find social measures sufficient, and they experience anxiety for this reason. In the study of Aslan and Pekince (2021), it was determined that there was no significant relationship between the Turkish nursing students' thinking that adequate precautions were taken during the COVID-19 pandemic process and their stress levels. In this study, it was found that 74.8% of the participants were afraid of not being able to maintain social distance in the hospital environment, status of fear of not being able to maintain social distance in the hospital environment was determined to be an affecting factor of COVID-19 phobia. The level of COVID-19 phobia of the students who were afraid of not being able to maintain social distance in the hospital environment was higher than those who were not fear. In addition, it was found in the study that using common areas such as toilets and elevators was another factor affecting the phobia level of the students. The level of COVID-19 phobia of students who experienced anxiety while using common areas was higher than those who did not experience anxiety.This result was attributed to the behavioral component of COVID-19 phobia, which includes behaviors adopted to prevent contamination with the virus, it can be said that students adopt safe health-related behaviors in order not to be infected with COVID (Arora et al., 2020).

Conclusions: Considering that nursing students are future frontier nurses and that pandemic process can have negative psychological impacts, nursing educators should focus on students' emotions. Educators must come up with strategies to address the students' psychological needs to reduce their COVID-19 phobia. Students should be allowed to express their feelings, and mindfulness-based interventions and coping with stress training should be included nursing curriculum. Nursing schools and healthcare institutions should collaborate to supported in order to students in caring for patients, and thus their anxiety, fear, and phobia decrease.

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References

Admi, H., Moshe-Eilon, Y., Sharon, D., & Mann, M. (2018). Nursing students' stress and satisfaction in clinical practice along different stages: A cross-sectional study. *Nurse education today*, *68*, 86-92. https://doi.org/10.1016/j.nedt.2018.05.027

Ahmed, W. A., & Mohammed, B. M. (2019). Nursing students' stress and coping strategies during clinical training in KSA. *Journal of Taibah University Medical Sciences*, *14*(2), 116-122.

Arora, A., Jha, A. K., Alat, P., & Das, S. S. (2020). Understanding coronaphobia. *Asian Journal of Psychiatry*, *54*, 102384. https://doi.org/10.1016/j.ajp.2020.102384

Arpaci, I., Karatas, K., & Baloglu, M. (2020). The development and initial tests for the psychometric properties of the COVID-19 Phobia Scale (C19P-S). *Personality and individual differences*, *164*, 110108.

Aslan, H., & Pekince, H. (2021). Nursing students' views on the COVID-19 pandemic and their percieved stress levels. *Perspectives in psychiatric care*, *57*(2), 695-701. https://doi.org/10.1111/ppc.12597

Casafont C, Fabrellas N, Rivera P, Experiences of nursing students as healthcare aid during the COVID-19 pandemic in Spain: a phemonenological research study. Nurse Educ Today. 2021;97:104711. https://doi.org/10.1016/j.nedt.2020.104711

Cervera-Gasch Á, González-Chordá VM, Mena-Tudela D. COVID-19: Are Spanish medicine and nursing students prepared? *Nurse Educ Today*. 2020;92(104473):1-3. https://doi.org/10.1016/j.nedt.2020.104473

Chew, N. W., Lee, G. K., Tan, B. Y., Jing, M., Goh, Y., Ngiam, N. J., ... & Sharma, V. K. (2020). A multinational, multicentre study on the psychological outcomes and associated physical symptoms amongst healthcare workers during COVID-19 outbreak. *Brain, behavior, and immunity*, *88*, 559-565. https://doi.org/10.1016/j.bbi.2020.04.049

Collado-Boira, E. J., Ruiz-Palomino, E., Salas-Media, P., Folch-Ayora, A., Muriach, M., & Baliño, P. (2020). "The COVID-19 outbreak"—An empirical phenomenological study on perceptions and psychosocial considerations surrounding the immediate incorporation of final-year Spanish nursing and medical students into the health system. *Nurse education today*, *92*, 104504. https://doi.org/10.1016/j.nedt.2020.104504

Curseu, P. L., Coman, A. D., Panchenko, A., Fodor, O. C., & Rațiu, L. (2021). Death anxiety, death reflection and interpersonal communication as predictors of social distance towards people infected with COVID 19. *Current psychology*, 1-14. https://doi.org/10.1007/s12144-020-01171-8

De Los Santos, J. A. A., Labrague, L. J., & Falguera, C. C. (2021). Fear of COVID-19, poor quality of sleep, irritability, and intention to quit school among nursing students: A cross-sectional study. *Perspectives in Psychiatric Care*, 1-8. 10.1111/ppc.12781

Delibas, L. (2021). COVID-19 phobıa and ıntensity of anxiety; a vocatıonal school example. *Pre-Hospital Journal, 6(2): 201-212.*

Dorttepe, Z. Ü., Hosgor, H., & Sagcan, H. (2021). The effect of COVID-19 phobia on perceived stress: The sample of prehospital emergency care professionals. *Journal of Academic Value Studies*, *7*(1), 31-40.

Eweida, R. S., Rashwan, Z. I., Desoky, G. M., Khonji, L. M. (2020) Mental strain and changes in psychological health hub among intern-nursing students at pediatric and medical-surgical units amid ambience of COVID-19 pandemic: A comprehensive survey. Nurse Education in Practice, 49, 102915.

Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G* Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior research methods*, *39*(2), 175-191.

Giacalone, M., Panarello, D., & Mattera, R. (2018). Multicollinearity in regression: an efficiency comparison between L p-norm and least squares estimators. *Quality & Quantity*, *52*(4), 1831-1859. https://doi.org/10.1007/s11135-017-0571-y.

Jardon, C., & Choi, K. R. (2022). COVID-19 Experiences and Mental Health Among Graduate and Undergraduate Nursing Students in Los Angeles. *Journal of the American Psychiatric Nurses Association*, 1-9. https://doi.org/10.1177/10783903211072222

Jones, D. S. (2020). History in a crisis—lessons for Covid-19. *New England journal of medicine*, *382*(18), 1681-1683.

Lee, G. C., & Ahn, J. (2020). College nursing students' experiences of COVID-19 pandemic. *Journal of the Korea Academia-Industrial cooperation Society*, *21*(12), 142-152.

Leng, M., Wei, L., Shi, X., Cao, G., Wei, Y., Xu, H., ... & Wei, H. (2021). Mental distress and influencing factors in nurses caring for patients with COVID-19. *Nursing in critical care*, *26*(2), 94-101.

Martin-Delgado, L., Goni-Fuste, B., Alfonso-Arias, C., De Juan, M., Wennberg, L., Rodríguez, E., ... & Martin-Ferreres, M. L. (2021). Nursing students on the frontline: Impact and personal and professional gains of joining the health care workforce during the COVID-19 pandemic in Spain. *Journal of Professional Nursing*, *37*(3), 588-597.

Ogolodom, M. P., Mbaba, A. N., Alazigha, N., Erondu, O. F., Egbe, N. O., Golden, I., ... & Eke, C. M. (2020). Knowledge, attitudes and fears of healthcare workers towards the Corona virus

disease (COVID-19) pandemic in South-South, Nigeria. *Health Science Journal*, 1-10.

Pan American Health Organization. Understanding the Infodemic and Misinformation in the Fight against COVID-19. Washington D.C.: PAHO; 2020. Available at: https://iris.paho.org/handle/10665.2/52052. Accessed 17 April 2022.

Rahman, S. (2021). Evaluation of COVID-19 Phobia Situations in Medical Students. *F.Ü.Sağ.Bil.Tıp.Derg*., 35(1): 68-73.

Roldán-Merino, J., Hurtado-Pardos, B., Molina-Raya, L., Bande, D., Casas, I., & Farrés-Tarafa, M. (2022). Psychological impact of the COVID-19 pandemic on nursing students in the first wave: A cross-sectional survey. *Nursing Open*. https://doi.org/10.1002/nop2.1207

Susmarini, D., Sumarwati, M., Handayani, F., & Iskandar, A. (2022). Nursing Students' Clinical Practice Experience during the COVID-19 Pandemic: A Qualitative Study. *Open Access Macedonian Journal of Medical Sciences*, *10*(G), 176-181.

Taylor, R., Thomas-Gregory, A., Hofmeyer, A. (2020). Teaching empathy and resilience to undergraduate nursing students: A call to action in the context of Covid-19. Nurse Education Today, 94, 104524. https://doi.org/10.1016/j.nedt.2020.104524

Tercan, B. COVID-19 Phobia Of Emergency And Disaster Management Students. *Gevher Nesibe Journal Of Medıcal & Health Scıences, 6*(15): 109-114.

Tülüce, D., & Kaplan Serin, E. (2022). Nursing Students' Opinions About Covid-19: A Qualitative Study. *OMEGA-Journal of Death and Dying*, 00302228211067041. https://doi.org/10.1177/00302228211067041

Ulenaers, D., Grosemans, J., Schrooten, W., & Bergs, J. (2021). Clinical placement experience of nursing students during the COVID-19 pandemic: A cross-sectional study. *Nurse education today*, *99*, 104746. https://doi.org/10.1016/j.nedt.2021.104746

Wang, C., Fardin, M. A., Shirazi, M., Pan, R., Wan, X., Tan, Y., ... & Ho, R. (2021). Mental health of the general population during the 2019 coronavirus disease (COVID-19) pandemic: a tale of two developing countries. *Psychiatry International*, *2*(1), 71-84.

Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., McIntyre, R. S., ... & Ho, C. (2020). A longitudinal study on the mental health of general population during the COVID-19 epidemic in China. *Brain, behavior, and immunity*, *87*, 40-48.

World Health Organization (2022). *WHO Coronavirus disease (COVID-19) dashboard overview.* Retrieved from https://covid19.who.int/. Access date; May, 22, 2022.

Higher Education Institution (NONE). (2021). Announcement Regarding the Spring Semester of the 2020-2021 Academic Year 17.02.2021 (Announcement Regarding the Spring Semester of the 2020-2021 Academic Year). Retrieved from: https://www.yok.gov.tr/HaberBelgeleri/BasinAciklamasi/2021/2020-2021-bahar-donemine-iliskin-aciklama.pdf . Access date; April, 12, 2021.