

Challenges experienced by nursing students during the COVID-19 pandemic

Zeliha Cengiz RN, PhD¹  | Züleyha Gurdap RN, MSc²  | Kevser Işık RN, PhD³ 

¹Department of Nursing, Faculty of Nursing, Inonu University, Malatya, Turkey

²Department of Fundamentals Nursing, Faculty of Nursing, Inonu University, Malatya, Turkey

³Department of Public Health Nursing, Faculty of Health Sciences, KSÜ, Kahramanmaraş, Turkey

Correspondence

Zeliha Cengiz, Department of Fundamentals Nursing, Faculty of Nursing, Inonu University, Malatya, Turkey.

Email: zeliha.cengiz@inonu.edu.tr

Abstract

Purpose: This study was conducted to assess the challenges faced by nursing students during the pandemic and to examine the factors affecting these challenges.

Design and Methods: This qualitative study involved 344 nursing students at a university in eastern Turkey.

Findings: Five main themes, each with its own subthemes, indicated the psychological difficulties experienced by students, insufficiencies and uncertainties regarding education, restrictions regarding social life, family conflicts, and the possibility to turn crises into opportunities.

Practice Implications: The themes emphasizing the lives of nursing students showed that there was a need for important measures, such as psychosocial support, determination of best practices for online education, supporting students with telemental applications by university counseling centres, and organization of action courses.

KEYWORDS

coronavirus disease 2019 (COVID-2019), nurses, students

1 | INTRODUCTION

Coronavirus disease 2019 (COVID-19) was declared by the World Health Organization (WHO) as a pandemic (WHO, 2020). COVID-19 spreads rapidly in close contact with respiratory droplets. Due to the high rate of contagiousness, even asymptomatic patients without any respiratory symptoms can infect unaware and unprotected people. Comprehensive measures need to be taken to control the current pandemic (Rothan & Byrareddy, 2020). Accordingly, infection control interventions are recommended, such as avoiding unprotected contact with sick people and their environment, washing hands frequently, maintaining physical distance from people with acute respiratory infections, and covering faces when coughing and sneezing with a disposable tissue or clothing (Lai et al., 2020). After the occurrence of the first COVID-19 case in Turkey on March 11, 2020, there was an attempt to prevent the spread of the virus through certain practices, such as limiting the entry and exits from the country, maintaining social distance, expanding the use of masks, banning people over 65 years of age and 20 years of age and younger

from leaving their homes, and suspending education (Ministry of Health, 2020). Due to the COVID-19 pandemic, regular university class education and clinical education in Turkey were interrupted. Education continued with remote online classes (<https://www.yok.gov.tr>).

During the pandemic, the nursing curriculum and the course contents of basic sciences and health systems were converted online in Turkey. When universities were evacuated from the campus, many students had to discontinue their research projects and internships. Additionally, students faced financial problems, such as returning home and managing their belongings. The literature suggests that public health emergencies can have many negative effects on university students (Auerbach et al., 2016; Lovrić et al., 2020; Mei et al., 2011). The pandemic has brought a range of psychological consequences in students, such as fear, anxiety, and depression, as well as behavioral changes like difficulty in sleeping, stress, and eating (Liu et al., 2020).

Thus, this health crisis affects not only the frontline staff and clinical leaders, but also universities, academic institutions, and entire systems. The role of nursing schools to help develop the next

generation of care providers faces unique challenges. Well-trained professionals are needed to ensure that the nursing potential is used by the global health and medical communities (Carolan et al., 2020; Dewart et al., 2020; Konrad et al., 2020).

This article focuses on the needs and concerns of nursing students in the face of the COVID-19 pandemic. In a society facing social distancing, isolation, and quarantine measures, as well as in need of nurses in the frontline, “how nursing education will continue” is an important question (Dewart et al., 2020). Providing a detailed analysis of nursing students' experiences in this period can contribute to supporting education, eliminating insufficiencies, and producing well-trained nurses. Therefore, this study was conducted to reveal the lives of nursing students during the COVID-19 pandemic, to evaluate the difficulties they experienced, and to investigate the factors affecting these difficulties.

2 | MATERIALS AND METHODS

2.1 | Study design and population

In this study, a qualitative design using thematic analysis was utilized to comprehensively reveal the experiences of nursing students during the COVID-19 pandemic. The research was carried out based on the methodological phenomenological pattern of qualitative research (Braun & Clarke, 2006). The purpose of the phenomenological basis is the experiences associated with an event, which is a reduction that assimilates the object (Creswell, 2014).

The study was conducted between May 15 and August 15, 2020. The participants of this study were nursing students who had access to the Internet.

2.2 | Sampling and recruitment

The population of the study consisted of students at “XX” University, School of Nursing. A total of 344 students were reached using the snowball sampling method. Nursing students who were registered to second grade and had access to the Internet were included in the study.

2.3 | Questionnaire and measurement

A structured questionnaire was prepared by the researchers by scanning the literature. The questionnaire consisted of multiple-choice and open-ended questions. The questionnaire, consisting of 17 questions, was divided into two sections: (1) sociodemographic characteristics and (2) experiences during the COVID-19 pandemic:

- (1) Sociodemographic characteristics consist of questions about age, gender, marital status, place of residence, monthly household income, chronic disease status, and smoking status.
- (2) Experiences during the COVID-19 pandemic consist of open-ended questions about how the pandemic affected educational

and social life, the difficulties and psychological challenges in educational life, and needs.

2.4 | Data collection

The questionnaire was developed by using a Google form. The participants were invited electronically via WhatsApp, personal emails, Instagram, and Facebook Messenger. Data were collected between May 30 and June 30, 2020. The questionnaire was developed in a way that a participant could only submit one form with a Google account.

2.5 | Ethical considerations

Before the initiation of the study, approval was obtained from a University Health Sciences Non-Interventional Clinical Research Ethics Committee and the Turkish Ministry of Health (number of decisions: 2020/672). Before the implementation of the questionnaire, information about the study was shared with each participant in writing. The system was established as responding to the questionnaire after obtaining the approval of the participants.

2.6 | Data analysis

Using qualitative software NVivo10 (QSR International, 2012), the data were organized using semantic thematic analysis as outlined by Braun and Clarke (2006). A thematic analysis was conducted for open-ended questions aiming to reveal the experiences of nursing students during the COVID-19 process in a comprehensive manner. We used an inductive approach to create a coding system for the analysis. All answers were copied to Microsoft Excel (version 2010). These answers were copied from the Excel program with a participant number and easily transferred to the NVivo program. After a thorough reading, the answers were analyzed by all researchers. The inductive approach was used to create the code system for analysis. A rough coding framework was created by the researchers after the first reading. Data-driven codes were then created. Researchers informed each other about the newly released codes. Encoding was terminated when the data reached saturation point and a consensus was reached. In the research, the inductive thematic saturation model was used and a summative content analysis was performed. This model focuses on identifying new codes or themes. Finally, the extracts under each code were analyzed and themes and subthemes were defined.

3 | RESULTS

Of the students participating in the study, 256 were female and 88 were male. One-hundred and one individuals were Grade 2, 109 individuals were Grade 3, and 124 individuals were Grade 4 students. Of the students, 211 resided in the city, 79 in the district, and 54 in the village.

While 23 students participating in the study had a chronic disease and 37 students were smokers. In this study, five main themes, each with its own subthemes, were determined because of the thematic analysis. While the first four themes highlight the negative aspects of nursing students' lives during the pandemic, interestingly, the last theme shows the positive aspects of the pandemic on students.

3.1 | Psychological challenges

COVID-19 challenged nursing students mostly psychologically. Psychological challenges experienced were explained by subthemes.

3.1.1 | Stress, anxiety, and uncertainty

The students associated their anxiety with the unknown and stated that this situation was very worrisome. Especially the uncertainty in education and career plans was worrisome for almost every student. One student stated, "it is very worrisome and tiring to think that nothing will ever be the same again. I have become someone who worries about everything, I can say that COVID-19 has affected our mental health in general." Another student said, "my desire to study decreased significantly due to anxiety about the future. It is not even clear whether we will graduate or not. Everything has stopped."

3.1.2 | I have become an introvert, a hopeless person

Suppressed emotions, occasional anger, feeling sad and exhausted caused some students to become introverted and to lose hope. One student stated, "I feel like I'm trapped. I am depressed, sad, and angry. Over time, I have become an introverted person who does not talk much." Another student said, "it's like boredom, depression, despair, and unhappiness have taken over me. I don't know what will happen and how I will overcome it."

3.1.3 | Obsessive behaviors

Repetitive behaviors in daily life and the fear of getting sick caused behavioral changes in all individuals as well as in nursing students. One student said, "I think I will continue my life after this as an obsessive person. I have become more obsessed with cleaning, especially. I constantly wash my hands, pour disinfectant everywhere, and don't touch anything."

3.1.4 | I'm overwhelmed, everything is so pointless

The students faced emotions, such as depression, frustration, and so forth because they were distanced from educational life, were not

able to engage in social activities, and many things they plan were left unfinished. Many students stated that they felt bored, overwhelmed, and uneasy because they are not active. A student said, "I haven't been informed for a long time about what our education life will be, and I am still in uncertainty, and uncertainty and boredom overwhelm my spirit. I cannot see my friends; I left the school where I studied and the opportunities there and returned home. I'm doing nothing, I just attended online classes occasionally. I'm bored and everything seems pointless."

3.1.5 | Sleep disorders

Most of the nursing students stated that they had trouble with sleep. Especially the increased Internet use and not having anything to do the next day resulted in sleep disorders, being at home all the time and mental distress turned into being in a constant sleepy state. A student said, "I get bored a lot at home, I sleep all the time. What else is there to do?" Another student said, "My sleep pattern is upside down, I cannot sleep at night, I cannot get up in the morning."

3.2 | Uncertainty and insufficiency in education

3.2.1 | How efficient are online lessons?

Due to COVID-19 courses offered in all the universities in Turkey have switched to distance education through online platforms. The nursing students stated that distance education was not efficient and that they had difficulties in attending classes, doing and submitting assignments. Many students, who mentioned that especially clinical applications were insufficient, expressed that they had no solution about how to gain skill-based learning. For example, a student stated; "we receive distance education, but everyone is aware that there is always something missing in distance education. Moreover, nursing is a department with an application course. In other words, distance education is insufficient." Another student said, "the efficiency I got from education has decreased. Experiences I would get from field practices are no longer available. "I am taking distance education, but I do not have a computer, I use a phone to log in, but sometimes it does not support the lecture videos and I cannot attend." Again, a student said, "assignments are requested through programs such as Word, but doing those assignments on the phone is very, very difficult and problematic. Since I don't have sufficient data plan to login, it doesn't load most of the time and I have trouble in continuing."

3.2.2 | Exams are passed somehow

While some students emphasized that online exams lead to unfair results, they stated that putting the effort and studying were not rewarded. A student said, "my interest in courses has decreased, I

used to try very hard, I was trying to be successful in the exams. Everyone passes the exams somehow; our efforts are in vain. I guess I'm not as keen as before.”

3.3 | My social life is over, and I cannot be without Internet

3.3.1 | We have to get used to an isolated life

COVID-19 has closed people up in their homes all over the world and put distance between individuals. The nursing students also emphasized that they cannot be the same as they used to be, especially because they moved away from the social environments provided by campus life. One student said, “I am sure that I will never feel safe outside from now on. I am worried as if I will be infected with the virus any moment and I never want to go out. During the pandemic, the concept of social life has left our lives. I feel imprisoned, I have to give up my loved ones, friends, and all my other habits and get used to being on my own.”

3.3.2 | Are the Internet and social media the new social life?

Social isolation caused by COVID-19 has significantly affected Internet and social media usage. Many of the students stated that they do not know how much time they spend online and that they constantly use the Internet. For example, a student said, “my social life now consists of social media. I haven't left the house for 2 months. I am active on social media. I cannot stay in an area without Internet.”

3.4 | Increase in family conflicts

During the pandemic, nursing students stated that they experienced an increase in family conflicts and that they could not get along with their parents. One student said, “I get stuck with unnecessary things because I have a lot of time to think. I can fight with my family, even for a small reason.”

3.5 | Turning crisis into an opportunity

Interestingly, in addition to the many negative effects of COVID-19, some students also had positive feedback. Some students stated that they had more time for themselves, found new activities, and had the opportunity to do different things for their personal development. For example, a student said, “I can say that it did not affect my life negatively because I have found new activities that fill my day. I sort of replaced it. I even took it as an opportunity to get to know myself better.”

4 | DISCUSSION

The primary aim of this study was to evaluate the difficulties experienced by nursing students during the pandemic and to investigate the factors affecting these difficulties. In our study, most of the students mentioned psychological challenges. These psychological effects manifested themselves as stress, anxiety and uncertainty, withdrawal and loss of hope, exhibiting obsessive behaviors, depression, and sleep problems. Previous studies have also supported that students show a series of psychological impairments during quarantine processes and pandemics (Cao et al., 2020; Jiang et al., 2020). There are many studies revealing negative psychological effects caused by COVID-19, such as fear, sadness, confusion, insomnia, depression, stress, and so forth (Mukhtar, 2020; Rana et al., 2020; Restubog et al., 2020; Shigemura et al., 2020). The psychological challenges of the students are especially associated with not knowing what will happen in the future and being exposed to the virus (Gallagher & Schleyer, 2020; Jiang et al., 2020; Lovrić et al., 2020; Wang, Horby, et al., 2020b). Although the effects of quarantine or social isolation have not yet been fully understood, we think that the students' sleep quality deteriorated due to reasons, such as spending more time in bed, spending more time on digital devices close to bedtime, going to bed late, and getting up late (Cellini et al., 2020; Romero-Blanco et al., 2020).

The main difficulties faced by nursing students regarding their education were the problem of adapting to online courses and the insufficiency of clinical practices that provided skills learning. The literature indicates that students have difficulty in adapting to rapidly changing educational conditions and that students in other countries experience similar problems (Dewart et al., 2020; Jiang et al., 2020; Singh & Haynes, 2020; Swift et al., 2020; Zhai & Du, 2020). Students are prepared for professional life by acquiring many attributes, such as the formation of professional identity in clinical settings, role modeling, and developing patient-nurse relationships. In addition, through campus life, fieldwork, and elective courses they both develop personally and socialize (Özkan & Gizir, 2013; Yağmur & İçigen, 2016; Zhai & Du, 2020). In other disastrous conditions, such as natural disasters, power outages, and fires, students can continue their education and assist with efforts (Dewart et al., 2020; Lewallen & Van Horn, 2019). However, with the emergence of a highly contagious pandemic, students may unknowingly transmit the virus or be infected. The uncertainty about how long this situation will continue and that quarantine and social distance may be required in the future increase the views on the formation of new education conditions in a “new normal” environment (Dewart et al., 2020; Konrad et al., 2020; Zhou et al., 2020). Therefore, nurse academics have to strive to ensure that appropriate learning activities are used to successfully meet the learning goals of nursing practices that are transitioning to an online format (Tyo & McCurry, 2019; Freytag et al., 2017; Johnson et al., 2020). This can be facilitated by care plans, interactive case studies, web-based learning activities, written work, communication activities, and class discussions (Johnson et al., 2020; King & Nininger, 2019; Konrad et al., 2020; McKenna et al., 2019; Moore-Cox, 2017). In addition, nursing schools are required to provide formal training on best practices in online education in order for students to continue their learning effectively (Benner et al., 2010; King & Nininger, 2019; Tyo & McCurry, 2019). Gathering small

groups online in virtual team environments, continuing student counseling to provide academic support to students, reviewing best practices examples of online training and counseling can be helpful (Akcaoglu & Lee, 2016; Rose, 2020). Faculty and staff should consider offering students virtual office hours and work together to be in communication and to help address students' academic concerns arising from the disruption. For students whose internships or research projects are affected by the pandemic, advisors should actively help students seek alternative plans, ensuring that they work from home to maximize their internship and research experience (Dewart et al., 2020; Konrad et al., 2020; Zhou et al., 2020). The university should provide services that continue to facilitate graduation and career development for university students (Zhai & Du, 2020). In the future, the use of online active learning techniques as a regular addition to traditional clinical practices can improve learning outcomes and turn our students into reliable, job-ready graduates (Konrad et al., 2020; Zhou et al., 2020). In this context, it is recommended that higher education institutions, healthcare professionals, and nurse academics develop action courses to better support students (Zhai & Du, 2020). Social life restrictions caused by increasing distances between people due to quarantine can force students to adapt to an isolated lifestyle and can lead to the emergence of a generation of Internet addicts. Brenner (1997) evaluated Internet addiction as a type of technological addiction and a subset of behavioral addiction. More and more people are spending more and more time on the Internet, as the Internet provides user-friendly interfaces, a convenient environment to check information and communicate with others, and has a wide range of users (Brenner, 1997; Chou & Hsiao, 2000; Kandell, 1998). Most people use the Internet in healthy and productive ways. However, some individuals may use the Internet "pathologically" (Chou & Hsiao, 2000; Kandell, 1998). In this sense, if (1) Internet use becomes the most important activity in their daily lives and dominates their thoughts; (2) their use of the Internet provokes "escape from the real world" or other similar experiences; (3) they feel compelled to spend increasing amounts of time online; (4) feel angry or moody when offline; (5) Internet use causes conflicts between themselves and their parents, teachers or friends, and between studying or sleeping; and (6) they revert to their previous usage patterns after a while when they try to stop or reduce their Internet use, we can suspect that students may become Internet addicts (Chou & Hsiao, 2000; Kandell, 1998). Studies have shown that university students are a population that is prone to pathologically using the Internet (Chou & Hsiao, 2000; Kandell, 1998; Ni et al., 2009). Kandell (1998) stated that exercise was good and people needed it, but excessive exercise could have a devastatingly negative effect on human health, and the Internet was similar to that (Kandell, 1998). Excessive use of the Internet can cause time management problems and health problems. In addition, excessive use of the Internet can lead to difficulties in other daily activities or to conflicts between users and people around them. The Internet may be essentially good, but as in other areas of life, too much of a good thing can cause problems (Chou & Hsiao, 2000; Kuss et al., 2013). The study of Young (1998) reported that Internet addicts spent less and less time with family and friends. It is known that anxiety disorders are more likely to occur and worsen in the absence of interpersonal communication (Wang, 2020a; Xiao, 2020). Considering the negative psychological effects of strict public

health isolation measures, such as temper, anger, fear, sadness, confusion, depression, stress, and so forth (Brooks et al., 2020), it is inevitable that this situation will result in family conflicts and disagreements for students. Many of the students participating in our study complained about family conflicts and tension.

In our study, some students reported that they managed their time well and found an opportunity for their personal development. However, when the study data were collected, we were just at the beginning of the quarantine days and the strict quarantine conditions increased day by day, which may have changed for students who turned the crisis into an opportunity. Still, it seems that some students developed coping strategies, and this should be supported. To support students, it is important that university counseling centers create options to continue providing distance counseling services (i.e., telehealth counseling) to university students, within the constraints imposed by the pandemic. For example, telemental health has been found effective in treating anxiety and depression symptoms (Brenes et al., 2015) and it would facilitate the provision of counseling services to address urgent mental health concerns of students (Dorsey & Topol, 2020; Singh & Haynes, 2020). University counseling centers can also provide options for students to join online support groups that allow them to share common concerns and receive social support (Rollman et al., 2018; Singh & Haynes, 2020). Moreover, university counseling centers should come together to develop public health messages and take action to communicate to students, share coping resources, protect students' health, and continue their education (Singh & Haynes, 2020; Zhai & Du, 2020).

4.1 | Limitations

This study has several limitations. First, the students' responses to the questionnaires may be far from being objective as they were obtained through their own self-evaluation. Second, because the data were collected through online surveys, a similar number of participants could not be achieved from all classes. Differences in education level can affect students' lives. Students who did not have online experiences and were unable to access the questionnaire may have participated less or they may not have participated at all. Finally, analyzing online messages without verbal cues could mean that our interpretation of their content is wrong. However, we analyzed all the responses within the context by closely reading all of them.

5 | CONCLUSION

Five main themes, each with their own subthemes, were determined as a result of the thematic analysis. The themes of psychological difficulties, uncertainty, and insufficiency in education, social isolation and Internet addiction, the increase in family conflicts, and the themes of turning crisis into an opportunity showed the need for gathering online in small groups and virtual team environments, identifying best practices regarding online education, that higher

education institutions and health professionals develop courses of action to better support students in this crisis, that universities need to raise awareness of students' needs and concerns and encourage their students to seek help and support.

5.1 | Implications for nursing practice

The COVID-19 epidemic has caused nursing students to experience significant difficulties and students' new needs have emerged. What are the difficulties nursing students experience and how they affect students is an important question in terms of educating well-equipped professionals. Providing a detailed analysis of nursing students' experiences during this period can contribute to supporting education, eliminating deficiencies, and training well-educated nurses.

ACKNOWLEDGMENTS

We would like to thank the deceased students who participated in our study for their contribution to the studies. The authors received no financial support for the research, authorship, and/or publication of this article.

CONFLICT OF INTERESTS

The authors declare that there are no conflict of interests.

ETHICS COMMITTEE APPROVAL

The Non-Interventional Clinical Research Ethics Committee of Inonu University Institute of Health Sciences (decision number: 2020/672).

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ORCID

Zeliha Cengiz  <https://orcid.org/0000-0002-3819-1717>

Züleyha Gurdap  <https://orcid.org/0000-0002-2231-8218>

Kevser İşik  <https://orcid.org/0000-0001-9081-7660>

REFERENCES

- Akcaoglu, M., & Lee, E. (2016). Increasing social presence in online learning through small group discussions. *The International Review of Research in Open and Distributed Learning*, 17(3), 1–17.
- Auerbach, R. P., Alonso, J., Axinn, W. G., Cuijpers, P., Ebert, D. D., Green, J. G., Hwang, I., Kessler, R. C., Liu, H., & Mortier, P. (2016). Mental disorders among college students in the World Health Organization world mental health surveys. *Psychological Medicine*, 46(14), 2955–2970.
- Benner, P., Sutphen, M., Leonard, V., & Day, L. (2010). A new approach to nursing education. *Educating Nurses, A Call for Radical Transformation*. San Francisco, CA: Jossey-Bass, 81–91.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Brenes, G. A., Danhauer, S. C., Lyles, M. F., Hogan, P. E., & Miller, M. E. (2015). Telephone-delivered cognitive behavioral therapy and telephone-delivered nondirective supportive therapy for rural older adults with generalized anxiety disorder: A randomized clinical trial. *JAMA Psychiatry*, 72(10), 1012–1020. <https://doi.org/10.1001/jamapsychiatry.2015.1154>
- Brenner, V. (1997). Psychology of computer use: XLVII. Parameters of Internet use, abuse and addiction: The first 90 days of the Internet Usage Survey. *Psychological Reports*, 80(3), 879–882.
- Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. *The Lancet*, 395(10227), 912–920. [https://doi.org/10.1016/S0140-6736\(20\)30460-8](https://doi.org/10.1016/S0140-6736(20)30460-8)
- Cao, W., Fang, Z., Hou, G., Han, M., Xu, X., Dong, J., & Zheng, J. (2020). The psychological impact of the COVID-19 epidemic on college students in China. *Psychiatry Research*, 287, 112934.
- Carolan, C., Davies, C. L., Crookes, P., McGhee, S., & Roxburgh, M. (2020). COVID 19: Disruptive impacts and transformative opportunities in undergraduate nurse education. *Nurse Education in Practice*, 46, 102807.
- Cellini, N., Canale, N., Mioni, G., & Costa, S. (2020). Changes in sleep pattern, sense of time and digital media use during COVID-19 lockdown in Italy. *Journal of Sleep Research*, 29, e13074.
- Chou, C., & Hsiao, M.-C. (2000). Internet addiction, usage, gratification, and pleasure experience: The Taiwan college students' case. *Computers & Education*, 35(1), 65–80.
- Creswell, J. W. (2014). *A concise introduction to mixed methods research*. SAGE Publications.
- Ministry of Health. (2020). Current situation in Turkey. <https://www.saglik.gov.tr/>
- Dewart, G., Corcoran, L., Thirsk, L., & Petrovic, K. (2020). Nursing education in a pandemic: Academic challenges in response to COVID-19. *Nurse Education Today*, 92, 104471.
- Dorsey, E. R., & Topol, E. J. (2020). Telemedicine 2020 and the next decade. *The Lancet*, 395(10227), 859. [https://doi.org/10.1016/S0140-6736\(20\)30424-4](https://doi.org/10.1016/S0140-6736(20)30424-4)
- Freytag, J., Stroben, F., Hautz, W. E., Eisenmann, D., & Kämmer, J. E. (2017). Improving patient safety through better teamwork: How effective are different methods of simulation debriefing? Protocol for a pragmatic, prospective and randomised study. *BMJ Open*, 7(6): e015977. <https://doi.org/10.1136/bmjopen-2017-015977>
- Gallagher, T. H., & Schleyer, A. M. (2020). "We Signed Up for This!"—student and trainee responses to the COVID-19 pandemic. *New England Journal of Medicine*, 382, e96. <https://www.yok.gov.tr>
- Jiang, L., Broome, M. E., & Ning, C. (2020). The performance and professionalism of nurses in the fight against the new outbreak of COVID-19 epidemic is laudable. *International Journal of Nursing Studies*, 107, 103578.
- Johnson, C. E., Kimble, L. P., Gunby, S. S., & Davis, A. H. (2020). Using deliberate practice and simulation for psychomotor skill competency acquisition and retention: A mixed-methods study. *Nurse Educator*, 45(3), 150–154. <https://doi.org/10.1097/nne.0000000000000713>
- Kandell, J. J. (1998). Internet addiction on campus: The vulnerability of college students. *Cyberpsychology & Behavior*, 1(1), 11–17.
- King, T. S., & Nininger, J. M. (2019). Quality improvement in online course development: Igniting the online teaching team. *Computers, Informatics, Nursing*, 37(7), 349–356.
- Konrad, S., Fitzgerald, A., & Deckers, C. (2020). Nursing fundamentals: Supporting clinical competency online during the COVID-19 pandemic. *Teaching and Learning in Nursing*, 16, 53–56.
- Kuss, D. J., Griffiths, M. D., & Binder, J. F. (2013). Internet addiction in students: Prevalence and risk factors. *Computers in Human Behavior*, 29(3), 959–966.
- Lai, C.-C., Shih, T.-P., Ko, W.-C., Tang, H.-J., & Hsueh, P.-R. (2020). Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and coronavirus disease-2019 (COVID-19): The epidemic and the challenges. *International Journal of Antimicrobial Agents*, 55, 105924.

- Lewallen, L. P., & Van Horn, E. R. (2019). The state of the science on clinical evaluation in nursing education. *Nursing Education Perspectives*, 40(1), 4–10.
- Liu, N., Zhang, F., Wei, C., Jia, Y., Shang, Z., Sun, L., Wu, L., Sun, Z., Zhou, Y., & Wang, Y. (2020). Prevalence and predictors of PTSD during COVID-19 outbreak in China hardest-hit areas: Gender differences matter. *Psychiatry Research*, 287, 112921.
- Lovrić, R., Farčić, N., Mikšić, Š., & Včev, A. (2020). Studying during the COVID-19 pandemic: A qualitative inductive content analysis of nursing students' perceptions and experiences. *Education Sciences*, 10(7), 188.
- McKenna, L., Cant, R., Bogossian, F. E., Cooper, S., Levett-Jones, T., & Seaton, P. (2019). Clinical placements in contemporary nursing education: Where is the evidence? *Nurse Education Today*, 83, 3759–3775.
- Mei, S., Yu, J., He, B., & Li, J. (2011). Psychological investigation of university students in a university in Jilin Province. *Medicine and Society*, 24(05), 84–86.
- Moore-Cox, A. (2017). Lesson plans: Road maps for the active learning classroom. *Journal of Nursing Education*, 56(11), 697–700.
- Mukhtar, M. S. (2020). Mental health and psychosocial aspects of coronavirus outbreak in Pakistan: psychological intervention for public mental health crisis. *Asian Journal of Psychiatry*, 51, 102069.
- Ni, X., Yan, H., Chen, S., & Liu, Z. (2009). Factors influencing internet addiction in a sample of freshmen university students in China. *Cyberpsychology & Behavior*, 12(3), 327–330.
- Özkan, C., & Gizir, S. (2013). The motives of undergraduate students to study at higher education institutions and their socialization tactics. *Eğitim ve Bilim*, 38(170).
- QSR International. (2012). *NVivo qualitative data analysis software (Version 10)*. QSR International Pty Ltd.
- Rana, W., Mukhtar, S., & Mukhtar, S. (2020). Mental health of medical workers in Pakistan during the pandemic COVID-19 outbreak. *Asian Journal of Psychiatry*, 51, 102080.
- Rollman, B. L., Herbeck Belnap, B., Abebe, K. Z., Spring, M. B., Rotondi, A. J., Rothenberger, S. D., & Karp, J. F. (2018). Effectiveness of online collaborative care for treating mood and anxiety disorders in primary care: A randomized clinical trial. *JAMA Psychiatry*, 75(1), 56–64. <https://doi.org/10.1001/jamapsychiatry.2017.3379>
- Romero-Blanco, C., Rodríguez-Almagro, J., Onieva-Zafra, M. D., Parra-Fernández, M. L., Prado-Laguna, MdC, & Hernández-Martínez, A. (2020). Sleep pattern changes in nursing students during the COVID-19 lockdown. *International Journal of Environmental Research and Public Health*, 17(14), 5222.
- Rose, S. (2020). Medical student education in the time of COVID-19. *Journal of the American Medical Association*, 323, 2131–2132.
- Rothan, H. A., & Byrareddy, S. N. (2020). The epidemiology and pathogenesis of coronavirus disease (COVID-19) outbreak. *Journal of Autoimmunity*, 109, 102433.
- Shigemura, J., Ursano, R. J., Morganstein, J. C., Kurosawa, M., & Benedek, D. M. (2020). Public responses to the novel 2019 coronavirus (2019-nCoV) in Japan: Mental health consequences and target populations. *Psychiatry and Clinical Neurosciences*, 74(4), 281–282.
- Singh, A., & Haynes, M. (2020). The challenges of COVID-19 in nursing education: The time for faculty leadership training is now. *Nurse Education in Practice*, 47, 102831.
- Swift, A., Banks, L., Baleswaran, A., Cooke, N., Little, C., McGrath, L., Meechan-Rogers, R., Neve, A., Rees, H., & Tomlinson, A. (2020). COVID-19 and student nurses: A view from England. *Journal of Clinical Nursing*, 29, 3111–3114.
- Tyo, M. B., & McCurry, M. K. (2019). An integrative review of clinical reasoning teaching strategies and outcome evaluation in nursing education. *Nursing Education Perspectives*, 40(1), 11–17.
- Wang, C., Cheng, Z., Yue, X. G., & McAleer, M. (2020a). Risk management of COVID-19 by universities in China. *Journal of Risk, Financial and Management*, 13(2), 36.
- Wang, C., Horby, P. W., Hayden, F. G., & Gao, G. F. (2020b). A novel coronavirus outbreak of global health concern. *The Lancet*, 395(10223), 470–473.
- World Health Organization (2020). Coronavirus disease (COVID-19) pandemic (2020). <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>
- Xiao, C. (2020). A novel approach of consultation on 2019 novel coronavirus (COVID-19)-related psychological and mental problems: Structured letter therapy. *Psychiatry Investigation*, 17(2), 175–176.
- Yağmur, Y., & İçigen, E. T. (2016). Üniversite öğrencilerinin sosyalleşme süreci ve rekreasyon faaliyetlerinin incelenmesi üzerine bir çalışma. *Anatolia: Turizm Araştırmaları Dergisi*, 27(2), 227–242.
- Young, K. S. (1998). Internet addiction: The emergence of a new clinical disorder. *Cyberpsychology & Behavior*, 1(3), 237–244.
- Zhai, Y., & Du, X. (2020). Addressing collegiate mental health amid COVID-19 pandemic. *Psychiatry Research*, 288, 113003.
- Zhou, T., Huang, S., Cheng, J., & Xiao, Y. (2020). The distance teaching practice of combined mode of massive open online course micro-video for interns in emergency department during the COVID-19 epidemic period. *Telemedicine and e-Health*, 26(5), 584–588.

How to cite this article: Cengiz, Z., Gurdap, Z., & Işık, K. Challenges experienced by nursing students during COVID-19 pandemic. *Perspect Psychiatr Care*. 2022;58:47-53. <https://doi.org/10.1111/ppc.12923>