Opinions of Nursing Students on Online Education in the Coronavirus Disease 2019 Pandemic: Qualitative Research

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Abstract

Background: Quarantine practices and social restrictions were introduced to reduce the mass deaths caused by the coronavirus disease 2019 and the speed of the epidemic all over the world. One of the protection measures taken due to the coronavirus disease 2019 pandemic is the compulsory online education application to prevent the epidemic.

Aims: This study aimed to determine the opinions of nursing students about online education due to the coronavirus disease 2019 pandemic.

Methods: The research was conducted on third-grade undergraduate nursing students who took the pediatric nursing course with online education as a qualitative design in phenomenology type. A total of 11 nursing students were included in the sample. A semi-structured interview form was used for the interview. The data were evaluated by content analysis according to "descriptive phenomenological analysis stages" consisting of 7 stages by Colaizzi.

Results: The students were between 20 and 24 years old, and 9 were women, and 2 were men. Two main themes named "Students' views on online education" and "Students' suggestions for more efficient processing of online education" were created. Students reported difficulties such as access and technical problems, difficulty in concentration, inefficiency, psychomotor skills, lack of communication and interaction, and health problems, as well as benefits such as being able to spare more time for them.

Conclusion: It was determined that online education was more effective in the theoretical education of the students, but they did not find it appropriate to use it in clinical education. Students suggested the use of methods such as educational videos and case discussions related to online education. Considering the results of the study, it is thought that the online education method should be used in combination with theoretical education. In addition, it is suggested to provide the necessary technical infrastructure in all educational institutions for the effective use of online education.

Keywords: Education, nursing, pediatric, qualitative research, students

Introduction

Due to the coronavirus disease 2019 (COVID-19) pandemic, education has been suspended in order to ensure the safety of educators and students in academic institutions worldwide and prevent transmission among the young population, and the transition from face-to-face education to urgent mandatory online education has been made.[1-4]

Nursing educators and students were also affected by the urgent mandatory online education process.[1,3,5] During the urgent online education period, it was reported that even if educators started to provide education services using online education technologies to meet the educational needs in changing conditions, some of them had difficulty due to their inexperience in creating educational technology and new educational material as a result of having to switch to online education method in a very short time.[1,3,6-8]

In this process, nursing educators continued their theoretical education with online synchronous or asynchronous education, where teleconferencing, online videos, and course presentations were supported by educational videos.[1,3,6,9] Although virtual patient simulation and video patient visit applications are used in almost all digital education facilities for application training, all educators agree that keeping long-term health education students away from application areas will make it challenging to achieve the goals in the education curriculum,[1,3,6,9] because online courses and simulation training constitute only

a small component of the current curriculum and that traditional training methods are complementary methods.[9,10]

Nurse educators evaluated the opportunities and difficulties that emerged during the urgent online education period in the literature.[1,5,7,11] These studies reported that the use of innovative educational technologies such as video conferences and virtual simulations during the pandemic period was a significant opportunity to integrate them into education curricula in the future and that online active learning techniques contributed to learning.[1,5,7,11]

It was reported that face-to-face education yielded more student–educator and student–student interaction which encouraged students to participate in the lecture.[12] According to the social learning theory, new behavioral patterns emerge from direct peer interaction or by observing peer behaviors.[13] Students' learning typically happens at amphitheaters, hospitals, operating rooms, practitioner clinics, and society in general.[14] Due to the COVID-19 pandemic, learning went online compulsorily.[15] In the literature, online learning is described as a type of remote learning that includes synchronous and asynchronous activities but lacks direct, face-to-face interactions between educators and students and allows students to learn at their own pace.[16] It has been a matter of interest how students who receive an education based on a curriculum transitioned from face-to-face education to online education learn and how to transfer their learning to clinical practice.[17] In this respect, it is imperative to understand the impact of online education on students' participation, learning, and behavior (positive and negative) in developing practical skills.[17,18]

Since there is no proven treatment for the COVID-19 pandemic, it is unknown precisely when it will end. It is thought that the online education method, which started compulsorily with the pandemic period, will be one of the primary teaching methods in the future. For these reasons, it is critical to evaluate the students who receive education experience in this process, what difficulties they face, and their thoughts on online education to structure this process correctly. Since there is no proven treatment for the COVID-19 pandemic, it is unknown precisely when it will end. It is thought that the online education method, which started compulsorily with the pandemic period, will be one of the primary teaching methods in the future. For these reasons, it is critical to evaluate the students who receive education experience in this process, what difficulties they face, and their thoughts on online education to structure this process correctly. It is clear that online education is an education technique that can be used after the COVID pandemic. For this reason, it is critical to plan online education depending on the experiences of students who receive online education. In the literature on the subject, it was determined that there was a limited study on the results and difficulties of online education with students studying in the field of health. It is thought that this study will contribute to the literature in this regard.

Objectives

This study was conducted to identify students' opinions about the online education they received after the pediatric nursing course, which used to be given face-to-face, was included in mandatory online training due to the COVID-19 pandemic.

Research Questions

1. What are the opinions about taking a pediatric nursing course with online education?

2. What are the suggestions to provide a more efficient education with online education?

Methods

Design and Setting

This study was conducted in a university's nursing department providing undergraduate education between September and October 2020 as a qualitative design in phenomenology type. This study aimed to identify students' opinions about this extraordinary education method after junior nursing students started taking the pediatric nursing course in online education instead of face-to-face due to the COVID-19 pandemic.

Sample

While Rubin and Babbie[19] recommend working with 3-10 people in phenomenological study, Charmaz[20] suggests that it should be carried out with at least 10 people. The universe of the study consisted of third-grade students composed of 11 people using a purposeful sampling method. The sample of the study consisted of 11 students who volunteered to participate in the study. Sampling inclusion criteria were determined as being a third-grade student of the nursing department, taking a pediatric nursing course with online education for the first time due to the COVID-19 pandemic, and volunteering to participate in the study. The sample's exclusion criteria were determined as having taken courses with online education previously, having taken pediatric nursing courses once, and students who wanted to leave the study at any stage of the study.

Data Collection Tool

Data were collected using student descriptive information form and semi-structured interviews. The student descriptive information form consists of questions describing the socio-demographic information of the students such as age and gender. The semi-structured interview form was prepared based on the literature.[21-24] At the start of the interview, students were asked about their age, gender, computer skills, computer/internet connection availability, technical issues in access to online education, learning motivation in online education, the practicality of offering nursing education online, and desire to receive nursing education (face-to-face education/online education). Examples of questions in the semi-structured interview form: (1) what do you think about the compulsory transformation of face-to-face education into online education? (2) What are the benefits of taking courses with online education (as theoretical, laboratory, and clinical)? (3) What are the difficulties of taking courses with online education (as theoretical, laboratory, and clinical)? (4) What are your suggestions for providing you with online education efficiently?

Due to the COVID-19 pandemic, the researchers conducted online interviews with the students through the Skype application. While the principal researcher conducted the interview, the recordings of the student interviews were made by both researchers. The interviews were recorded and lasted between 16 and 30 minutes.

Trustworthiness

Since the researcher investigates the problem at the Center of qualitative study, the researcher is the primary measurement tool. Considering that the researcher is a subjective and objective research tool, the concept of "trustworthiness" is considered instead of validity and reliability in the qualitative study.[25] For this reason, all data collection and analysis records were kept regularly. Quotes were

made from all data sources. Verifiability was achieved through a collaborative data analysis study between the responsible investigator and the coinvestigator to reduce investigator bias.

Data Analysis

The content analysis method was used in the analysis. In this context, "descriptive phenomenological analysis stages" consisting of 7 stages proposed by Colaizzi[26] were used. The data was read over and over again. Two independent researchers evaluated the data. After determining the codes extracted from each researcher, word, and sentence, a standard code list was created by gathering the researchers. After the resulting codes, thematic coding was started, the researchers classified the codes, and appropriate themes were removed. Finally, all interviewed and observed data were coded and interpreted, and reported.

Ethical Considerations

Ethics committee permission was obtained from the Yuksek Ihtisas University's Ethics Committee (Approval Number: 2020/09/01, Date: 11.09.2020), where the study was conducted, and written permission was obtained from the Ministry of Health, school administration, and verbal and written consent was obtained from the students.

Findings

Introductory Characteristics of Students and Their Experiences Related to Online Education

The students were between 20 and 24 years old, and 9 were women, and 2 were men. All of the students had computer training, computer, and internet. More than half of the students had access problems during online education. Eight students reported that online education negatively affected their motivation to learn. Ten students cannot be given nursing education with online education, and all students want to receive education with face-to-face education.

In this study, 2 main themes related to students' views and suggestions for more efficient processing of online education. Students' views on online education included 2 subthemes: advantages of online education and challenges of online education. The other main theme is related to students' suggestions for more efficient processing of online education, and it contains theoretical, laboratory, and clinical practice subthemes.

THEME 1: Students' Views on Online Education

Students took the pediatric nursing course as a branch course with online education with Zoom and Skype programs. The opinions of the students were grouped under 2 subthemes and a total of 10 codes (Figure 1).

Subtheme 1: Advantages of Online Education

Four codes were created under the first subtheme in line with the students' opinions (Figure 1). Students stated that they spend more time with themselves thanks to online education, school costs decrease, and comfort and computer usage skills increase.

(S3,F,20)

"*I had many expenses, such as school expenses, food, drinking, book expenses, and it was perfect for me economically.*"
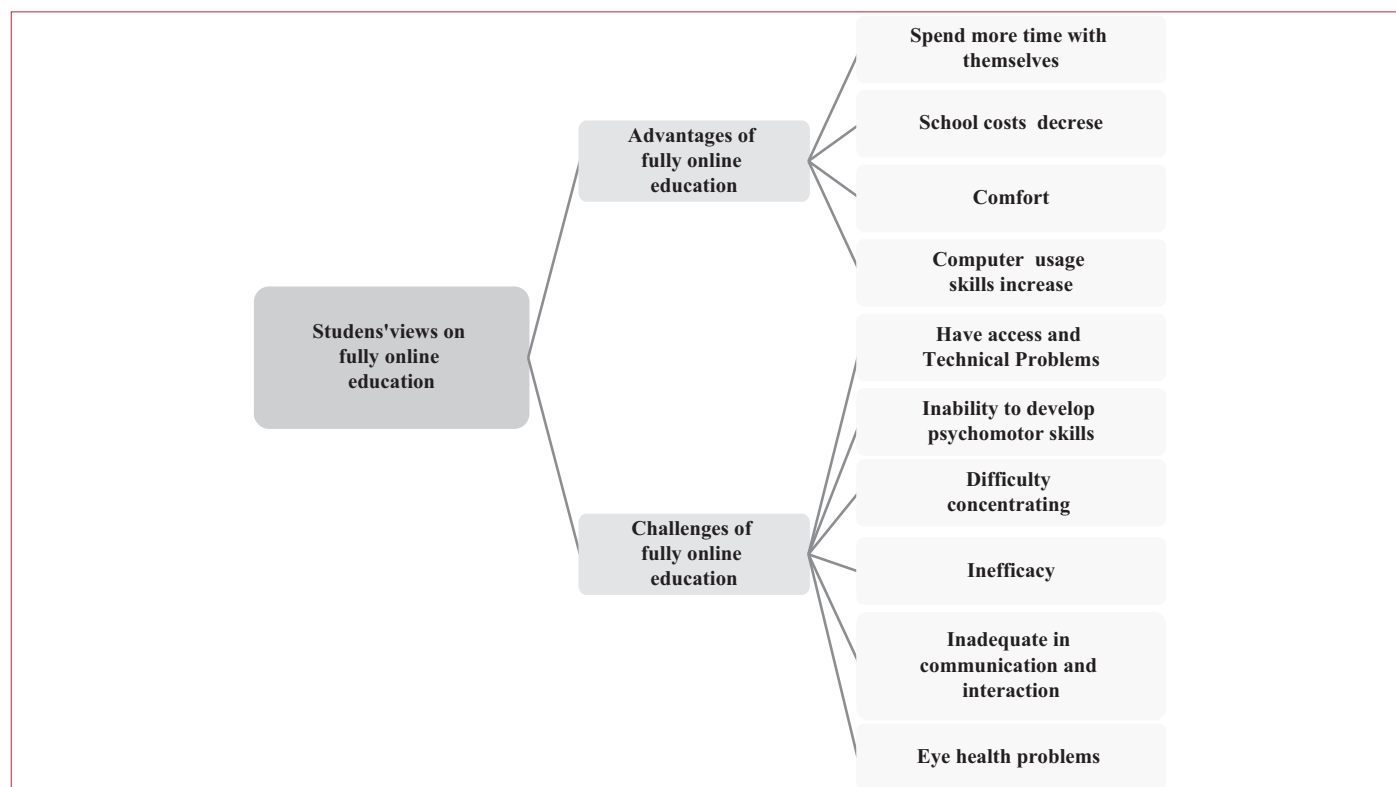
(S3,F,20)

Figure 1. Students' views on online education.

"… I get out of bed, I sit on the chair, I don't wait for the bus, I am not out in the cold for hours, I don't spend much time on the road, I don't get tired at all, so it was comfortable for us."

(S6,F,21)

"*You can watch the lesson again whenever we can get our attention, so it was an advantage for me to attend the lesson when you feel better when we are mentally free, you are not sleepy in the morning, you are not hungry, you do not have to go to school if I do not understand a lesson, I can watch it again, it was good for me in this respect.*"

(S11,F,23)

"I noticed that I was typing faster while preparing a seminar paper, so I improved my writing."

(S6,F,21)

Subtheme 2: Challenges of Online Education

As a result of the students' interviews, 6 codes were created under the second subtheme (Figure 1). Students were found to have access and technical problems during the online education process.

"*… It was troubled by the weather, and the internet was not getting reception, then the internet came again and sometimes it never came. My computer would get warm, and then suddenly it would shut down and not record what I wrote.*"

(S6,F,21)

"*For example, in the examination, the internet went out, the system kicked me out, I suddenly panicked…*"

(S8,F,23)

Students who participated in the study reported inadequate psychomotor skills due to laboratory and clinical practice lessons through video and case presentation methods in online education.

"*… there is a camera, but there is no one-on-one patient, and we are talking about many diseases… there is no one to see it live on…teacher, for example, every child has a different reaction or every child has a thing to understand this, there is a level of coping, the drugs to be applied are different, and the side effect of the drug on the body is also different.*"

(S1,F,21)

"*We were supposed to see skills such as drug calculation, general diseases in the hospital, but we did not see any of these; we are very lacking in this respect.*"

(S8,F,23)

Students stated that they had difficulty concentrating in online education, the application courses were inefficient, they were inadequate in communication and interaction, and they had eye health problems due to constant computer screen viewing.

"*At first, the process was very uncertain; we could not teach properly; it was inefficient.*"

(S8,M,23)

"*… as long as you do not start to communicate with the child patient, there is no continuation of this, we have not communicated with the child at the moment, no matter how well we know the theory, we may be nervous when we confront him/ her..*"

(S1,F,21)

"*I am a student, who makes eye contact with the teacher a lot in lessons, and normally when I talk, I attach great importance to eye contact; I try to state that I understand, but we cannot do this in this online education.*"

(S6,F,21)

THEME 2: Students' Suggestions for More Efficient Processing of Online Education

The students' opinions were grouped under 3 subthemes and a total of 13 codes (Figure 2).

Subtheme 1: Theoretical

Eight codes were created under the first subtheme in line with the students' opinions (Figure 2). Students suggested that lessons should be given during school hours and that uploading only course documents into the system was ineffective in understanding the subject, so an instructor should explain it. Moreover, the students suggested that the cameras should be on during the course, the instructor's asking questions about the subject would help attract attention and control participation in the study, lecture breaks should be given because they may have difficulty in concentration, lesson durations should be kept short, the documents belonging to the course should be uploaded to the system, and short verbal exams should be held.

"*If lessons start at school time like we're in school again, then I think we can really feel in school.*"

(S7,M,20)

"*If I were you, I'd get the camera turned on. Because when the student does not turn on the camera, you do not know whether he/she is there or not, whether he/she listens to you or not…*"

(S2,M,24)

"*I think course times should not exceed 20 min and basic information should be given because we cannot sit for 40 min, we cannot sit at our computer desk even if we want to.*"

(S10,F,22)

"*Teacher, I think pdf documents should be uploaded because we have limited access to books, and this is already online training…*"

(S7,M,20)

"*Once a week, as small topics piled up, if I were you, I could do a verbal examination like a midterm examination because everyone would have to listen and study because they would be graded.*"
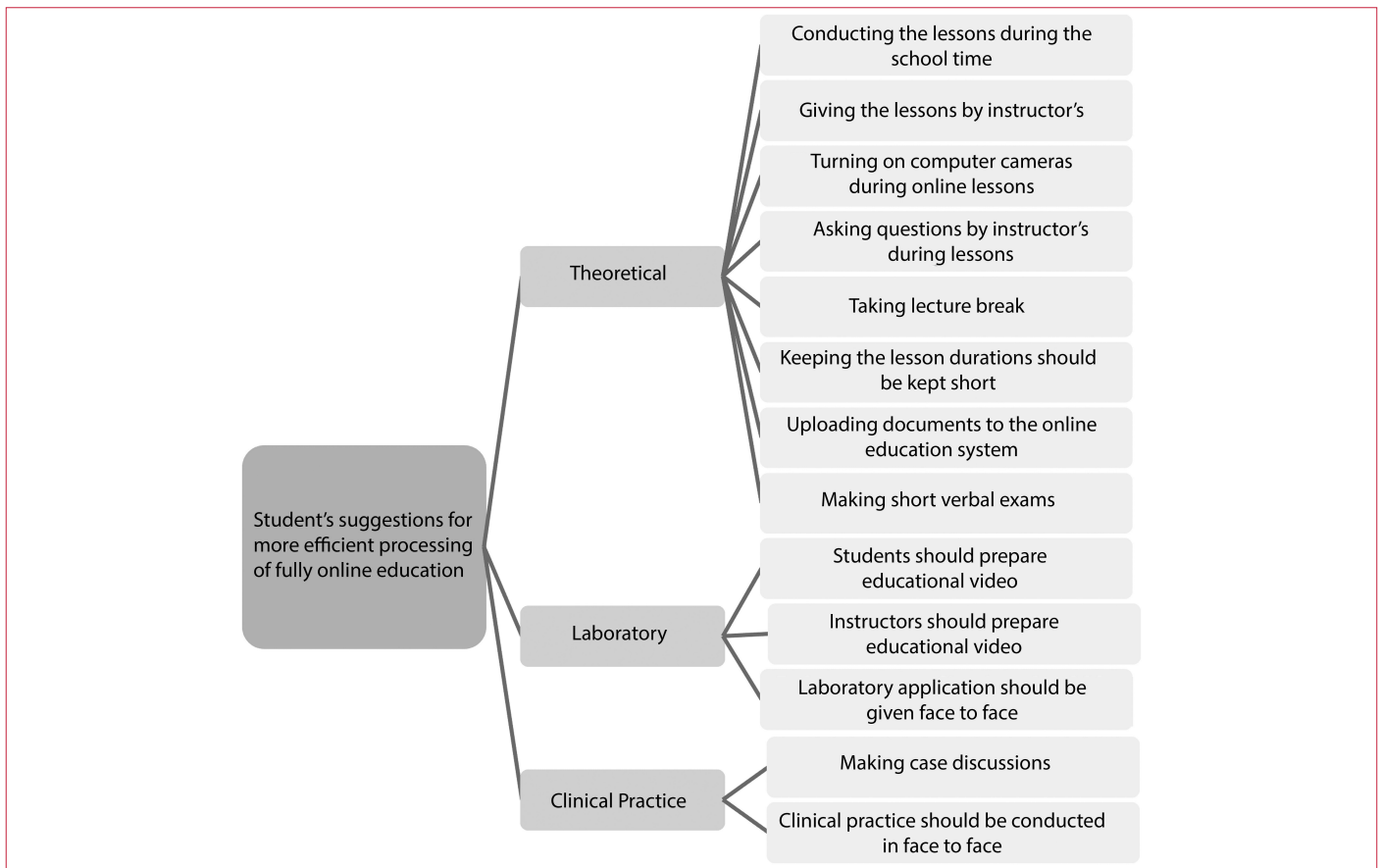
(S7,M,20)

Figure 2. Students' suggestions for more efficient processing of online education.

Subtheme 2: Laboratory

Three codes were created under the second subtheme in line with the students' opinions (Figure 2). Students suggested that if laboratory application training was given only by online education, students should prepare educational videos, educational videos requiring special materials should be designed by the instructor in the laboratory, and laboratory applications should be given face-to-face.

"*If I were you, I would have the videos taken by the students. I would have the videos taken of all the applications.*"

(S10,F,22)

"*If there was no possibility, it was beneficial for our teacher to show the models and processes in the laboratory in the video.*"

(S8,F,23)

"*I think laboratory practice should be face-to-face, even if it is once a week.*"

(S8,F,23)

Subtheme 3: Clinical Practice

Two codes were created under the third subtheme in line with the students' opinions (Figure 2). Students suggested that case discussions

could be practical if a clinical practice is provided through online education.

"*I think, the case presentations are more interesting to us, frankly, since everyone can be asked questions at that time, you understand who knows how much and when they listen, and I think it would be better for us.*"

(S9,M,21)

Students suggested that clinical practice training should be conducted in face-to-face practice areas instead of online education.

"*...we will always be in this profession, and after graduation, this may also coincide with the period in which we worked... I think that the students may learn better how to cope with them, how to manage them in this process, and even contribute much more to his/her professional life.*"

(S3,M,20)

Discussion

This study was conducted to identify students' opinions about online education. As a result of the study, 2 main themes related to students' views and suggestions for more efficient processing of online education. The first theme included 2 subthemes: advantages of online education and the challenges of online education. The other main

theme was related to students' suggestions for more efficient processing of online education, and it contains theoretical, laboratory, and clinical practice subthemes.

In a study conducted in Spain, nursing students emphasized that technological resources and the internet were significant in online education.[11] A study conducted in Pakistan reported that 43% of nursing students experienced internet and connection problems, and 10% could not participate in the online course due to power outages.[5] In the study conducted by Adnan and Anwar,[24] it was determined that university students had limited access to internet opportunities, a lack of appropriate communication-interaction with students and instructors, and inadequate technology use. Similar to our study results, it was seen in the literature.[5,11,24]

In their study, Jiménez-Rodríguez and Arrogante[11] stated that computer-assisted simulated scenarios increase and reinforce nursing students' nontechnical skills (communication, active listening, appearance, empathy, and teamwork). On the other hand, students reported that this method was a disadvantage in developing technical skills. In the study of Afşar and Büyükdoğan,[21] students criticized distance education because it could not be applied, and face-to-face teaching did not replace it. One of the biggest problems experienced by students during the pandemic period is that nursing patient care should be taught in real care environments, while they had to learn patient care virtually during the online education process. Therefore, during the pandemic period, students were insufficient in learning psychomotor skills. "Do you think the application course can be given entirely online education?" 90.9% of the respondents answered "No" to the question.

In a study conducted in Pakistan, 71.4% of the students reported that learning in traditional classrooms was more motivating than online learning.[24] In a study conducted with nursing students, 83.5% of the students stated that distance education would cause deficiencies in the laboratory and clinical practice training, which have an important place in the nursing profession, 79.8% said that not all courses in nursing could be taught with online education and 73.7% stated that it eliminates face-to-face communication, environment, and opportunities.[22]

In the study of Ramos-Morcillo et al.[23] nursing students stated that upload of only course documents to the system only was not sufficient in learning; therefore, the information given should be explained, and they wanted all video conferences to be recorded so that they could be watched again when needed. A study conducted in the UK reported that educational videos, group studies, projects, questions and answers, games, and surveys could help provide theoretical courses to nursing students with online education.[8]

The instructor created educational videos in the laboratory environment for the students in the laboratory application training. Furthermore, students were asked to prepare educational videos about the materials in their homes and pediatric practices. It may be said that these 2 methods are effective in online education.[2,3,7]

In a study conducted with nursing students in America during the pandemic, instructors provided clinical practice training with practices such as care plans, interactive case studies, web-based learning activities, communication activities, and classroom discussions.[7] Clinical practice training was given to all students in the hospital during the first 6 weeks of the semester. Although a case discussion was held with students through online education, it was seen that at the end of the semester, the students mostly remembered the practices they saw in the hospital. For this reason, it is thought that clinical practice cannot be completed only with vision and hearing, and when the 5 senses are involved together in nursing care, the practice is more permanent, and no method is as effective as clinical practice.

In the study examining the effectiveness of online education, third and fourth-grade nursing students stated that their education would be incomplete, they would not feel sufficient, and clinical practice skills could not be learned only with online education.[23] Many academicians suggested the cooperation of clinical and school administrators to maintain clinical practices effectively.[2,27] As a matter of fact, this cooperation was mentioned in the "State of the World's Nursing 2020: Investing in Education, Jobs and Leadership" report published jointly by the World Health Organization and the International Nurses Council.[28] As a result of the study, it can be concluded that students' clinical practice skills can be gained more effectively and permanently in clinical settings instead of online education.

Limitations

The results of the study were limited to the opinions of third-grade students of a university. Furthermore, only the opinions of the students about online education were taken in the study. To increase the contribution of the study results to the application, inter-institutional cooperation and conducting studies on the subject with large sample groups will increase the generalizability of the results. In addition, interview times were shorter than recommended for a phenomenological study. Although there are studies in the literature that support the duration of 45-60 minutes,[29,30] there are studies carried out in less time.[23,31] These periods may have been influenced by subjects such as the subject of the study, the profile of the sample, and the depth of the event.

Conclusion

Students reported challenges such as access and technical problems, poor concentration, inefficiency, lack of psychomotor skills, communication, interaction, and health problems and benefits such as more time to self and comfort. Students stated that they were willing to take the pediatric nursing course face to face while recommending using methods such as educational videos and case studies for practical courses in whole remote learning. The future study may suggest taking online education instructors' opinions and comparing them with the students' views.

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