

Opinions and Experiences of Students and Educators on Nursing Education Via Emergency Distance Education During the COVID-19 Pandemic Period

COVID-19 Pandemi Sürecinde Hemşirelik Öğrenci ve Eğitimcilerinin Acil Uzaktan Öğretime İlişkin Görüş ve Deneyimleri

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ABSTRACT

Purpose: This study was carried out in order to assess the views and experiences of nursing students and educators, at a faculty of nursing in XX, about the emergency remote teaching activities in nursing education during COVID-19 pandemic period.

Materials and Methods: The study was designed in the descriptive type. Nursing students (N=337) and educators (N=30) were included in this study. The data was collected using the "Questionnaire Form" that evaluates the views and experiences of the participants about the remote teaching process.

Results: It was found that the views and experiences of the educators and nursing students regarding the remote teaching process were generally positive. There was no statistically significant difference between the views of students and educators in many expressions specified in the questionnaire ($p > .05$).

Conclusions: The study results have shown the views and experiences of educators and nursing students regarding the remote teaching process were positive.

Keywords: Nursing education, emergency remote teaching, nursing student

ÖZ

Amaç: Bu araştırma, Hamidiye Hemşirelik Fakültesi'nde öğrenim gören hemşirelik öğrencilerinin ve eğitimcilerinin COVID-19 pandemi döneminde hemşirelik eğitiminde acil uzaktan öğretim faaliyetlerine ilişkin görüş ve deneyimlerini değerlendirmek amacıyla yapılmıştır.

Gereç ve Yöntem: Araştırma tanımlayıcı tipte tasarlanmıştır. Hemşirelik öğrencileri (N=337) ve eğitimciler (N=30) bu çalışmaya dahil edilmiştir. Veriler, katılımcıların uzaktan öğretim sürecine ilişkin görüş ve deneyimlerini değerlendiren "Anket Formu" kullanılarak toplanmıştır.

Bulgular: Eğitimcilerin ve hemşirelik öğrencilerinin uzaktan öğretim sürecine ilişkin görüş ve deneyimlerinin genel olarak olumlu olduğu bulundu. Ankette belirtilen birçok ifadeye göre öğrenci ve eğitimcilerin görüşleri arasında istatistiksel olarak anlamlı bir farklılık bulunmamıştır ($p > .05$).

Sonuç: Araştırma sonuçları, eğitimcilerin ve hemşirelik öğrencilerinin uzaktan öğretim sürecine ilişkin görüş ve deneyimlerinin olumlu olduğunu göstermiştir.

Anahtar Kelimeler: Hemşirelik eğitimi, acil uzaktan öğretim, hemşirelik öğrencisi

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INTRODUCTION

Coronavirus Disease 2019 (COVID-19), a global epidemic affecting the world, has caused the death of thousands of people up to date and it is a growing problem worldwide (1). The increasing number of cases and deaths affects health systems and raises concerns about this health crisis. This global health crisis influenced the health and education systems that are of great importance to society (2).

The social distancing restrictions associated with the COVID-19 pandemic have profoundly changed the nursing education and practical trainings worldwide. During the COVID-19 pandemic, nurse educators, needed to review and focus on the quality of the education of nursing students,

the learning needs, and concerns. There are growing concerns about nurses' education under the restrictions of social distance and quarantine measures, and outcomes of nursing education (2-4). The Canadian Association of Schools of Nursing emphasizes the need to maintain high-quality nursing education to protect the community's health, delay the graduation of nursing students given the urgent health care needs, and enable nurse educators to maintain their role as educators in this crisis (3). Nurse educators needed to adapt quickly to the changes during the crisis associated with the COVID-19 pandemic (2,5).

Nurse educators have developed strategies and procedures for pursuing the nursing education. Nursing schools have made a very rapid transition to emergency remote teaching. During the COVID-19 pandemic, health institutions in some countries have reported to admit a limited number of nursing students for practical training. In contrast, some institutions have stated that only healthy students can pursue their practical training at such institutions (2,5).

The literature emphasizes that education during the pandemic period has different dynamics from usual practices of distance education. For this reason, the educational activities implemented in this period are defined as emergency remote teaching. Emergency remote teaching involves distance learning solutions during a crisis or emergent case when education cannot continue face-to-face (6-10).

The nursing faculty where the study is applied, face-to-face education has been suspended since mid-March 2020, and emergency remote teaching has been put into practice in nursing education, as in other schools of health. During the COVID-19 pandemic process, deans of nursing faculties have held meetings and made a mutual decision to continue nursing education. Several online symposiums have been organized by the Turkish Association for Evaluation and Accreditation of Nursing Education Program and the Nursing Education Association in Turkey. The nursing associations have discussed the road map for maintaining good-quality nursing education during the epidemic process (11,12).

It is noteworthy that there are limited studies on student and educator views on remote nursing teaching in the literature. However, evaluating nursing students' and educators' views about the remote teaching system is of great importance for education quality. Also, there are various uncertainties and concerns regarding the COVID-19 pandemic process. Because of these uncertainties and the course of the pandemic, remote teaching practices may be needed for longer period. The effectiveness of remote teaching practices in nursing education should be examined and educators should be developed a remote teaching system specific to nursing education based on research data. This research aimed to assess nursing students' and nursing educators' views and experiences about nursing education through emergency remote teaching amidst the COVID-19 pandemic period.

Research questions

1. What are the nursing students' views and experiences about the emergency remote teaching activities in nursing education during the COVID-19?
2. What are the nurse educators' views and experiences about the emergency remote teaching activities in nursing education during the COVID-19?
3. Is there a difference between nurse educators' and nursing students' views and experiences about the emergency remote teaching activities in nursing education during the COVID-19?

MATERIALS AND METHODS

Design

The design of the study was the descriptive type.

Setting

The research was conducted at a nursing faculty. The faculty has begun its undergraduate and graduate education since the 2016-2017 academic year. Faculty of Nursing offers theoretical and practical education provided by ten nursing departments. These departments provided various theoretical or practical training as compulsory

and elective courses.

During the COVID-19, all of the courses were taught online (synchronized) with the virtual classroom platform. The student's active participation in the course was supported through active learning methods such as video, scenario, simulated/standard patient, case studies, and team-based project preparation. Through virtual classrooms, educators and students came together on a virtual platform. The courses taught on this platform were recorded, and nursing students could follow the recorded courses on this system whenever and wherever they wanted. Nurse educators prepared some guidelines for the exams, and videos for exam preparation for the educators. The exams were held online, and the exam results and experiences were evaluated. The study was conducted in the spring semester of the 2019-2020 academic year spring semester during the COVID-19 pandemic in XX faculty of nursing.

Research Population

The research population consisted of the nursing students and nurse educators studying in the spring semester of the 2019-2020 academic year at a nursing faculty in XX. The total number of the students studying at nursing faculty was 362. Of all students, 83 were first-grade students, 90 were second-grade students, 180 were third-grade students, and 81 were fourth-grade students. The nursing academicians consisted of 30 educators.

Participants

This study included all students educated by remote teaching in nursing education and agreed to fill out the questionnaire and the educators who worked at the same faculty.

The study aimed to reach the entire research population so that the sample size was not calculated. A total of 93% (N=337) of the research population was reached. The student sample consisted of 78 first-grade, 101 second-grade, 88 third-grade, and 69 fourth-grade students. All (N=30) educators participated in this research.

Data Collection Tools

The researchers collected data using three tools.

The sample's characteristics were gathered using the Student Personal Information Questionnaire and Educator Information Questionnaire. The researchers asked the participants about their views and experiences about the remote teaching process using the Survey.

Student Personal Information Questionnaire: It includes questions regarding the sociodemographic characteristics (age, gender, class) of the students.

Educator Information Questionnaire: It contains 13 questions about the educators' sociodemographic, academic and remote teaching experiences. There are questions about age, academic experience, previous remote teaching experience, training of educators related to remote teaching, and theoretical education hours and laboratory course hours.

Survey: It includes 28 statements about the content of the remote teaching method, its duration, the effects of remote teaching, and the effectiveness of remote assessment methods. The researchers constituted the survey by using the literature (11,13,14). The items were prepared according to the five-point Likert type. Each item was scored from 5 to 1 (from "Strongly Agree" to "Strongly Disagree). There were six negative items (items 20, 21, 25, 26, 27, and 28). These items were scored reversely. The higher scores indicate positive views and experiences about the remote teaching process.

Before data collection, the survey was assessed by several experts. The survey items were rated by five nurse academics specializing in the Fundamentals of Nursing, Nursing Education, Internal Medicine Nursing, and Surgical Nursing to evaluate their degree of suitability in Turkish language. The experts were asked to evaluate the linguistic suitability of each survey item with a score between 1 and 4 (score 1: unsuitable/ to be removed; score 2: slightly suitable/to be revised; score 3: quite suitable/suitable but requiring slight change, and score 4: very suitable).

The Survey's content validity index was 0.98 based on experts' scores and evaluation results. The experts did not offer to delete any statement

from the questionnaire. The researchers reviewed the last version of the questionnaire again according to the statements proposed by the experts. A pilot study (43 students, two educators) was applied with its final version of the Survey. Cronbach's alpha internal consistency coefficient of the survey was 0.91.

Data Collection Procedures

A link was prepared to collect the data via the Google Forms program. Data was collected by asking students and educators to fill out this form via the link.

Data Analysis

All statistical analyses were performed using the Statistical Package for the Social Sciences (SPSS Inc., Chicago, IL, USA) version 25.0 for Windows. Nominal variables were evaluated as frequency and percentage, while ordinal variables were evaluated as mean and standard deviation. Outcomes data such as experiences in students and educators were compared using one-way ANOVA analysis of variance for four groups (the students' class/grade), and the t-test was used for pairwise groups (students and educators). Statistical significance was set at $p < .05$, and Tamhane's T2 test was performed as a post hoc analysis.

Approval was granted by the University of Health Sciences, Hamidiye Scientific Research Ethical Committee Office (Study number: 20/320; number: 46418926-050.01.04)

RESULTS

Characteristics of nursing students and nurse academics

The average age of nursing students was 20.90 years ($SD \pm 1.81$), and 81% were females. One third of sample (29.9%) were second-grade, 26.1% were third-grade, 22.1% were first-grade, and 20.4% were fourth-grade students.

Table 1 shows the characteristics of nurse educators. Two of the nurse educators were professors, three were associate professors, 19 were assistant professors, and six were research assistants.

Nursing Students' Opinion about Remote Teaching Activities

Table 2 shows the findings regarding the views of nursing students about remote teaching activities. The study did not find statistically significant difference between the responses to only eight statements (Item 6, 10, 12, 15, 21, 25, 26, and 28th) in terms of students' classes ($p > .05$) (Table 2). Analyses did not reveal differences between students experiences about the technical problems during remote teaching to negatively influence their learning ($p = .09$). All students had similar views that economic and physical environmental conditions influence their access to remote teaching ($p = .104$, $p = .149$) and that being connected to a fixed screen for a long time during remote teaching had adverse effects on physical health ($p = .177$).

The current study also found that statistically significant differences between the mean scores of 20 statements (1-5, 7-9, 11, 13, 14, 16-20, 22-24, 27) in terms of students' classes ($p < .05$). The first-grade students' remote teaching survey scores were statistically and significantly higher than the second, third and fourth grade students ($p = .001$) (Table 2).

Nurse Educators' Views about Remote Teaching Activities

Table 3 shows the educators' views on remote teaching activities and comparing students' and educators' views. The mean score of survey showed that the nurse educators' views and experiences about the remote teaching process (110.70 ± 12.70) were more positive than the students' experiences (101.10 ± 16.60).

Comparison of Students' and Educators' Views on the Remote Teaching Activities

The nurse educators obtained higher survey scores than the students' scores. However, the comparisons did not reveal any statistically significant difference between scores of students (101.10 ± 16.6) and nurse educators (110.70 ± 12.7) ($p = .554$).

The students obtained statistically lower scores than the educators from item seventh and 16th.

Table 1. Characteristics of Nurse Academics (N = 30) (Istanbul, 2020)

Variables	Mean ± SD	Min-Max
Age	38.06 ± 6.60	24-53
Working period as an academic (years)	8.60 ± 6.60	1-30
Working period at the institution (years)	2.36 ± 0.96	1-5
Asynchronous course hours	1.90 ± 5.70	0-29
Synchronous course hours	16.40 ± 12.22	0-42
Theoretical course hours	14.30 ± 10.45	0-38
Laboratory course hours	2.20 ± 3.01	0-12

Table 2. Students' Views on Remote Teaching Activities (N = 337) (Istanbul, 2020)

Assessment Form for the Remote Teaching Process in Nursing Education	First	Second	Third	Fourth	F p T
	Grade ^a	Grade ^b	Grade ^c	Grade ^d	
	(n=78)	(n=101)	(n=88)	(n=69)	
	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	
1. An enhanced education environment supported by audio-visual tools was offered by remote teaching.	3.37 ± 1.04	3.88 ± .91	3.95 ± .85	3.89 ± 0.64	7.541 < .001* b, c, d > a
2. Our education and training process wasn't disrupted thanks to remote teaching.	3.38 ± 1.15	3.87 ± .94	3.93 ± .98	4.01 ± .68	6.731 < .001* b, c, d > a
3. Remote teaching is as effective as face-to-face education.	2.35 ± 1.33	3.30 ± 1.33	3.20 ± 1.27	3.00 ± 1.18	9.202 < .001* b, c, d > a
4. I participated in the courses online.	3.80 ± .98	4.21 ± .81	4.26 ± .73	4.20 ± .58	5.732 .001* b, c, d > a
5. I watched later the courses I couldn't attend online.	3.66 ± 1.07	4.07 ± .89	4.01 ± .91	3.72 ± .97	3.891 .009* b > a
6. Recording of course videos allowed me to repeat what was thought during the course.	4.16 ± 1.03	4.16 ± .87	4.30 ± .74	4.08 ± .81	.830 .478
7. The videos provided for the laboratory practices by remote teaching helped me learn the subject.	2.94 ± 1.11	3.61 ± 1.04	3.78 ± 1.07	3.19 ± 1.06	10.64 < .001* b, c, d > a; c > d

8. In the remote teaching process, educators used active learning methods.	3.66 ± .94	4.04 ± .84	4.17 ± .801	3.97 ± .62	5.805 .001* b, c > a
9. I was able to acquire effective and adequate knowledge through remote teaching.	3.21 ± 1.13	3.85 ± .97	3.86 ± .97	3.88 ± .74	8.839 < .001* b, c, d > a
10. I was able to acquire, through remote teaching, the skills I needed.	2.91 ± 1.10	3.69 ± 1.05	3.8 ± 1.01	3.64 ± .82	12.959 < .001* b, c, d > a
11. I acquired positive attitudes on related course subjects through remote teaching.	3.38 ± 1.10	3.85 ± .99	3.97 ± .91	3.98 ± .65	7.083 < .001* b, c, d > a
12. The fact that the course hours can be changed (flexible) in remote teaching enabled me to follow my courses without interruption.	3.26 ± 1.24	3.95 ± .89	4.01 ± .95	4.16 ± .74	12.649 < .001* b, c, d > a
13. The lack of time constraints in remote teaching provided a suitable learning environment.	3.37 ± 1.2	3.87 ± 1	3.88 ± 1.09	3.82 ± .87	4.396 .005* b, c, d > a
14. The lack of space constraints in remote teaching provided a suitable learning environment.	3.30 ± 1.27	3.90 ± 1.02	3.90 ± 1.11	3.80 ± .79	5.938 .001* b, c, d > a
15. The time allocated to courses in remote teaching was sufficient.	3.65 ± .97	3.96 ± .83	4.06 ± .81	4.08 ± .53	4.712 0.003* b, c, d > a
16. Time was sufficient for the remote assessment methods (midterm, final exam).	2.83 ± 1.25	3.01 ± 1.31	3.87 ± .94	2.83 ± 1.22	14.925 < .001* c > a, b, d
17. All necessary measures were taken by educators for the validity and reliability of the exams.	3.64 ± 1.03	3.95 ± .92	4.04 ± .84	3.85 ± .73	3.09 .027* c > a
18. The questions in the remote assessment methods reflected the content of the subject.	3.88 ± .96	4.05 ± .83	4.13 ± .79	3.97 ± .54	1.481 .219
19. During remote teaching, I maintained effective communication with my schoolmates.	3.87 ± .98	4.06 ± .85	4.15 ± .81	3.91 ± .76	1.981 .117

20. During the remote teaching process, I was able to communicate effectively with educators in the classroom.	3.64 ± 1.03	4.02 ± .86	4.05 ± .78	4.00 ± .75	4.106 .007* b, c, d > a
21. I had online or offline access to educators during the remote teaching process.	3.78 ± .89	3.99 ± .86	4.15 ± .77	4.20 ± .61	4.373 .005* c, d > a
22. I participated in group works in the courses involving such works during the remote teaching process.	3.96 ± .93	4.10 ± .83	4.17 ± .802	4.22 ± .64	1.48 .22
23. I had technical problems in the remote teaching process.	2.53 ± 1.35	2.33 ± 1.10	2.84 ± 1.26	2.80 ± 1.26	3.379 .019* c, d > b
24. Technical problems I experienced in remote teaching prevented my learning.	2.92 ± 1.26	2.62 ± 1.27	2.98 ± 1.29	3.07 ± 1.21	2.181 .09
25. My economic situation affected my access to remote teaching.	3.43 ± 1.28	2.97 ± 1.32	3.32 ± 1.32	3.20 ± 1.32	2.07 .104
26. The physical environment I was in prevented my access to remote teaching.	3.22 ± 1.38	2.89 ± 1.29	3.20 ± 1.26	3.30 ± 1.24	1.788 .149
27. Staying fixed and connected to the screen during courses negatively affected my psychology.	2.76 ± 1.29	2.50 ± 1.26	3.85 ± 1.25	3.04 ± 1.18	2.735 .044* c > b
28. Staying fixed and connected to the screen during courses negatively affected my physical health.	2.68 ± 1.29	2.56 ± 1.17	2.74 ± 1.21	2.95 ± 1.17	1.439 .231
Total	92.10 ± 18.80	101.50 ± 15.20	105.80 ± 16.20	102.7 ± 12.80	10.437 < .001* b, c, d > a

F: One-Way Anova test, T: Tamhane's T2 test, n: Number of participants, SD: Standard Deviation. * $p < 0.05$

Nursing students were not satisfied with the adequacy of the videos used for the laboratory practices by remote teaching helped me learn the subject ($p = .019$) and the duration of the online exam ($p < .001$).

Nurse educators reported experiencing fewer technical problems ($p = .005$) accessing the remote teaching than the students' reports (2.61 ± 1.25 , $2.50 \pm .93$, respectively) (item 23rd). However, nurse educators stated that the technical problems influence their teaching activities more

negatively compared to students (3.26 ± 1.04 , 2.88 ± 1.26 , respectively) ($p = .010$) (item 24th). Nurse educators obtained lower scores from items 25th and 26th than nursing students. Nurse educators stated that those economic conditions ($p = .003$) and physical factors ($p = .002$) influenced less negatively their access to remote teaching compared to nursing students (Table 3).

Table 3. The educators' views about the remote teaching activities, and comparison of students' and educators' views (Istanbul, 2020)

<i>Assessment Form for the Remote Teaching Process in Nursing Education</i>				
	Student (n = 337)	Educator (n = 30)	Statistical Analysis	
Question	<i>Mean ± SD</i>	<i>Mean ± SD</i>	F	p
1	3.78 ± .91	4.10 ± .75	1.527	.217
2	3.80 ± .98	4.43 ± .67	2.156	.143
3	3.00 ± 1.33	3.26 ± .19	3.257	.072
4	4.13 ± .81	4.33 ± .61	.090	.765
5	3.89 ± .97	4.20 ± .76	.060	.807
6	4.18 ± .86	4.43 ± .67	.064	.801
7	3.42 ± 1.12	4.00 ± .83	5.551	.019*
8	3.97 ± .83	4.26 ± .69	.212	.646
9	3.71 ± 1.00	4.20 ± .76	3.034	.082
10	3.53 ± 1.06	3.33 ± 1.12	.039	.844
11	3.80 ± .96	3.96 ± .76	2.557	.111
12	3.85 ± 1.02	4.53 ± .57	3.476	.063
13	3.75 ± 1.07	4.10 ± .99	.818	.366
14	3.70 ± 1.09	4.13 ± 1.01	.642	.423
15	3.94 ± .82	4.53 ± .57	.003	.955
16	3.16 ± 1.26	4.43 ± .62	15.51	<.001*
17	3.88 ± .91	3.86 ± 1.13	2.781	.096
18	4.02 ± .81	4.50 ± .51	.002	.961
19	4.01 ± .86	4.56 ± .51	.108	.742
20	3.94 ± .87	4.33 ± .71	.256	.613
21	4.02 ± .81	4.60 ± .49	.078	.780
22	4.11 ± .81	4.36 ± .66	.130	.719
23	2.61 ± 1.25	2.50 ± .93	8.157	.005*
24	2.88 ± 1.26	3.26 ± 1.04	6.680	.010*
25	3.21 ± 1.32	2.90 ± 1.02	8.927	.003*
26	3.13 ± 1.30	2.90 ± 1.02	9.405	.002*
27	2.76 ± 1.26	3.56 ± 1.22	.043	.836
28	2.71 ± 1.21	3.06 ± 1.28	.051	.821
Total	101.10 ± 16.6	110.70 ± 12.7	.350	.554

Note: *t*: independent-samples *t*-test, *n*: Number of participants, *SD*: Standard Deviation. * *p* < .05

DISCUSSION

The COVID-19 pandemic process required the nurse-training schools to be innovative, flexible, and agile. This health crisis required the educational activities to be transformed from face-to-face classrooms into online ones, providing alternative clinical experiences, and evaluating the student performance emerged (15). Educational activities carried out remotely during the pandemic, however important changes is needed to be made in education. It is of great importance to analyze the situation experienced in order to keep up with changing situations. In this context, this research was carried out to assess the views and experiences of nursing students and educators about the remote teaching activities in nursing education amidst the COVID-19 pandemic period.

The results of the current study showed that most of the questions asked about student views on the remote teaching activities were positive. This result can be associated with the fact that the study sample is directed towards Generation Z, who are born in the digital age. Similarly, in Mather and Sarkans' (16) study, most students preferred remote online education as a method of education. Also, Şenyuva (2013) (17) reported that the nursing students' views about remote patient education were generally positive. The most positive view of our students regarding distance education was that this method allowed this when they could not attend the course online or wanted to repeat the course. This result can be regarded as a positive finding for remote teaching to support home learning in nursing education.

Some studies stated that the most positive feature of distance education is that students are able to watch the videos of the courses they could not attend (18,19).

While distance learning allows increased access to education and more flexibility for the students, it may have some challenges such as technical problems. Similar to our study, Subedi stated that technical problems such as internet access, electrical problems were an important obstacle for distance education (20). The current study compared the views and experiences of the nursing students related to the remote teaching activities in terms for students' grade compared. The first-grade students expressed more negative views about many items of the survey than other grade-students. The interaction between the learner and the teacher is very important in learning environments. Distance education may become more difficult for first-grade students who are not yet able to provide this interaction. Individual interviews and small group work can be recommended during compulsory distance education for improving interaction of first-year students (17-21)

This study also determined that the educators' views and experiences about the remote teaching process were positive. The nursing students and educators generally have similar most views on remote teaching practices. However, the trainers need to make improvements in some areas taking into account the nursing students' views. The COVID-19 health crisis affected students' learning opportunities as clinical placements were suspended. As lectures and courses rapidly transitioned to online teaching, it was not possible to manage pre-clinical activities such as simulations and laboratories (21). In this study, the educators stated that the videos used in laboratory training were effective. However, the students did not agree with educators about efficiency of videos used in laboratory training. This result reveals the importance of face-to-face education to acquire skills. The study of Kürtüncü and Kurt (21) determined that the student's problems related to remote teaching were the thought that both theoretical and applied courses would

be insufficient with remote teaching. A study (22) examined the views of nursing students on remote teaching and this study found that remote teaching was not as effective as face-to-face education for learning psychomotor skills. These conclusions point out that nurse academics need to develop strategies to improve remote teaching courses for clinical skills. It is recommended that educators perform their laboratory practices synchronously in the laboratory environment to continue laboratory courses more effectively. It is also suggested that educators use innovative training methods during laboratory practices (23)

Another important issue that the students and educators differed was about the exams performed. During the crisis caused by COVID-19, appropriate changes were made to exam procedures, and a rapid transition to online exams was ensured (5) While the participants agreed on the exam questions, validity, and reliability, the exam duration was an important problem for the students. In line with the results, conducting pilot studies related to the duration of exams may shed more lights about exam efficiency and students' concerns. In this study, nursing students reported that the remote teaching process's technical factors affected their learning more negatively than the educators (24)

This finding shows that nursing students need more support in technical issues during remote teaching practices. If it is necessary to use the remote teaching practices in nursing education, it may be suggested to inform students about using the remote teaching system and establish or form the units that will provide technical support and counselling via telephone or internet at the school. Besides, the students stated that economic and physical environmental conditions prevent them from accessing remote teaching and that being connected to a screen during remote teaching has negative effects on physical health. This important result shows that students need support for access to necessary resources for internet and remote teaching, and they also need counselling in the provision of appropriate physical environments for such teaching (17-21,23,25,26).

Limitations

The research results reflect students' and educators' remote teaching experiences and opinions at only one faculty in XX. Research data is limited only to responses to questionnaire items.

Conclusion

This study has provided results for the effectiveness of education should be improved according to students' and teachers' opinions. Educators' and nursing students' opinions and experiences regarding the remote teaching process were positive in general, and students in all grades generally had similar views on the remote teaching practices. Nursing students stated that there is a need of regulations and strategies to enhance in laboratory practices and duration of exams. Also, students need support for the settlement of technical problems, provision of appropriate physical conditions, and access to the internet and necessary resources for remote teaching. The results obtained as a result of this study will shed light on more effective maintenance of nursing education through remote teaching practices in similar health crises and after.

Yazar Katkıları: Çalışma konsepti/Tasarımı: MS, SA, SG; Veri toplama: Dİ, HÖ, GT; Veri analizi ve yorumlama: Dİ, HÖ; Yazı taslağı: Dİ, HÖ, GT; İçeriğin eleştirel incelenmesi: SA, SG; Son onay ve sorumluluk: MS, SA, SG Süpervizyon: MS

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References

1. World Health Organization, Coronavirus Disease 2019 (COVID-19). Situation report–55. [Internet]. 2020 [Access date: 04.05.2021]. Available at https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200315-sitrep-55-covid-19.pdf?sfvrsn=33daa5cb_8
2. Dewart G, Corcoran L, Thirsk L, Petrovic K. Nursing education in a pandemic: Academic challenges in response to COVID-19. *Nurse Educ Today*. 2020;92:104471.
3. Canadian Association of Schools of Nursing (CASN) Nursing education during the COVID-19 pandemic. [Internet]. 2020 [Access date: 08.01.2021]. Available at <https://www.casn.ca/wp-content/uploads/2020/03/COVID-19-POSITION-STATEMENT.pdf>
4. Hassmiller SB, Beauvais AM, Shellenbarger T. The future of nursing report 10 years later: where is nursing and what work remains?. *Nurs Educ Perspect* 2020;41(5), 272-273. doi: 10.1097/01.NEP.0000000000000724.
5. Jackson D, Bradbury-Jones C, Baptiste D, Gelling L, Morin K, Neville S, Smith GD. Life in the pandemic: Some reflections on nursing in the context of COVID-19. *J Clin Nurs*. 2020;29(13-14):2041-2043.
6. Billings DM, Distance education in nursing. *Comput Nurs*. 1996;14 (4):211-2.
7. Keegan D, *Foundations of Distance Education*. 3rd revised edition. London and New York, Routledge, 1996;218.
8. Yüksek Öğretim Kalite Kurulu (YÖKAK). Distance education COVID-19 pandemic. [Internet]. 2020 [Access date: 01.02.2021]. Available at <https://portal.yokak.gov.tr/makale/pandemi-doneminde-uzaktan-egitim/>
9. Costa, Roberta, et al. "Nursing teaching in covid-19 times: How to reinvent it in this context?" *Texto & Contexto-Enfermagem* 2020;29 doi: 10.1590/1980-265x-tce-2020-0002-0002
10. Moore J, Dickson-Deane C, Galyen K. E-Learning, online learning, and distance learning environments: Are they the same? *The Internet and Higher Education* 2010;14(2),129-

135.

11. Eygü H, Karaman S. A study on the satisfaction perceptions of distance education students. *Kırıkkale Üniversitesi Sosyal Bilimler Dergisi*. 2013;3(1):36-59.
12. Senyuva E, Tasocak G. Implementation of web-based distance education in nursing education in turkey: a sample lesson in patient education. *International Journal of Distance Education Technologies*. 2014;12(3):1-13.
13. Ozturk D, Eyikara E, Baykara ZG. The opinions of nursing students regarding the first implementation of distance education. *World Journal on Educational Technology*. 2017;9(2):51-58.
14. Kırallı FN, Alcı B. University students' views on perception of distance education. *İstanbul Aydın Üniversitesi Dergisi* 2016;30: 55-83.
15. Morin K, Editorial. Nursing education after COVID-19: Same or different? *J Clin Nurs* 2020;29:3117-3119.
16. Mather M, Sarkans A. Student perceptions of online and face-to-face learning. *International Journal of Curriculum and Instruction*. 2018;10(2):61-76.
17. Şenyuva E. Nursing student's view about distance education. *International Online Journal of Educational Sciences* 2013;5(2):409-420.
18. Serçemeli M, Kurna EA. A research on the perspectives of students on distance education and distance accounting education in the COVID-19 pandemic period. *Journal of International Social Sciences Academic Researches* 2020;4(1):40-53.
19. Gürer MD, Tekinarslan E, Yavuzalp N. Online instructors' views on distance education. *Turkish Online Journal of Qualitative Inquiry* 2016;7(1):47-78. [doi:10.17569/tojqi.74876](https://doi.org/10.17569/tojqi.74876).
20. Subedi S, Nayaju S, Subedi Shah KS, Shah JM. Impact of e-learning during COVID-19 pandemic among nursing students and teachers of Nepal. *International Journal of Science and Healthcare Research* 2020;5(3):68-76.
21. Tomietto M, Comparcini D, Simonetti V, Cicolini G. Nursing education: challenges and perspectives in a COVID-19 age. *Prof Inferm*. 2020;73(3):131-132.
22. Kürtüncü M, and Kurt A. Problems experienced by nursing students about distance education during the COVID-19 pandemic period. *Eurasian Journal of Researches in Social and Economics (EJRSE)* 2020;7(5):66-77.
23. Hsieh HY, Hsu YY, Ko NY, Yen M. Nursing education strategies during the COVID-19 epidemic. *Hu Li Za Zhi* 2020;67(3):96-101. [doi: 10.6224/JN.202006_67\(3\).13](https://doi.org/10.6224/JN.202006_67(3).13).
24. Gökmen ÖF, Duman İ, Horzum MB Theories, changes and new directions in distance education. *Açıköğretim Uygulamaları ve Araştırmaları Dergisi* 2016;2(3):29-51.
25. Bozkurt A. Coronavirus (COVID-19) pandemic process and educational evaluations in the post-pandemic world: New normal and new education paradigm. *AUAD* 2020;6(3):112-142.
26. Savitsky B, Findling Y, Ereli A, Hendel T. Anxiety and coping strategies among nursing students during the covid-19 pandemic. *Nurse Educ Pract*. 2020;46:102809.