ISSN: 2651-4451 • e-ISSN: 2651-446X

Turkish Journal of Physiotherapy and Rehabilitation

2022 33(2)71-80

Esra DOĞRU HÜZMELİ, PT, PhD[1]
Yağmur TUĞRAL, PT, PhD[2]
Özden GÖKÇEK, PT, PhD[3]
Itır KAVVASOĞLU, PT[1]
Muhammet Şehmus FİLİZ, PT[1]
Batın .PAZARBAŞI, PT[1]
Fatma Eda ÇİFT, PT[1]
Sevgi BAYTAK, PT[1]
Eren LEKESİZ, PT[1]
Sabiha BEZGİN, PT PhD[1]

1 Hatay Mustafa Kemal University, Health Science Faculty, Physiotherapy and Rehabilitation Department, Hatay, TURKEY.
2 Izmir Demokrasi University, Health Science Faculty, Physiotherapy and Rehabilitation Department, Izmir, TURKEY.
3 Ege University, Health Science Faculty, Physiotherapy and Rehabilitation Department, Izmir, TURKEY.

Correspondence (İletişim):

Esra DOĞRU HÜZMELİ
Hatay Mustafa Kemal University,
Health Science Faculty,
Physiotherapy and Rehabilitation Department, Hatay, TURKEY.
Phone: +90 541 804 94 41
E-mail: esradogru001@hotmail.com
ORCID: 0000-0002-7025-8192

Yağmur TUĞRAL
E-mail: yyagmurcam@gmail.com
ORCID: 0000-0002-9118-3572
Özden GÖKÇEK
E-mail: ozdencanbay@hotmail.com
ORCID: 0000-0003-3396-4108
Itır KAVVASOĞLU
E-mail: ikavvasoglu@gmail.com
ORCID: 0000-0003-3568-453X
Muhammet Şehmus FİLİZ
E-mail: muhammetfiliz1905@gmail.com
ORCID: 0000-0002-3749-9453
Batın PAZARBAŞI
E-mail: pazarbasibatin123@gmail.com
ORCID: 0000-0001-8080-951X
Fatma Eda ÇİFT
E-mail: eda.cift.7@gmail.com
ORCID: 0000-0001-8305-591X
Sevgi BAYTAK
E-mail: sevgi.buket96@gmail.com
ORCID: 0000-0001-6614-0186
Eren LEKESİZ
E-mail: fzt.erenlekesiz@gmail.com
ORCID: 0000-0002-8849-8039
Sabiha BEZGİN
E-mail: sabihasahilog@gmail.com
ORCID: 0000-0002-8459-8956

Received: *05.07.2021 (Geliş Tarihi)*
Accepted: *20.06.2022 (Kabul Tarihi)*

WHAT DO PHYSIOTHERAPY AND REHABILITATION STUDENTS THINK ABOUT ONLINE LEARNING DURING THE PANDEMIC?

ORIGINAL ARTICLE

ABSTRACT

Purpose: Online learning is a comprehensive type of education in which the teacher and the student are physically separated. We wanted to know how online learning was evaluated through the view of physiotherapy and rehabilitation students.

Methods: We included 283 students from department of physiotherapy and rehabilitation in the study. A questionnaire that consisted of 45 multiple-choice questions and 2 open-ended questions was applied to the students. The questions involved whether the student has previously participated in any online learning program, has had access to online learning and technical problems experienced during access.

Results: Our study included 210 (74.20%) women and 73 (25.80%) men. We questioned status of having online learning before the pandemic and 49.82% of the students reported that they did not receive online learning before. We found that 21.55% of the students could not motivate themselves. 30.39% of the students thought having insufficient education in the practical courses due to online education. 10.25% of the students stated that they could not access the necessary equipment for online learning. In the question about they received high-quality education with online learning; 21.55% of the students stated that they did not agree at all.

Conclusion: We think that it is more beneficial to give some theoretical courses online and synchronized, and practical courses face to face. Therefore, we think that it will be beneficial to postpone the practical courses that cannot be done face to face due to the pandemic and to give those courses face to face after the pandemic process.

Key Words: Education, Online Learning, Pandemic, Practical Course, Student

PANDEMİDE FİZYOTERAPİ VE REHABİLİTASYON ÖĞRENCİLERİ ONLINE ÖĞRENME HAKKINDA NE DÜŞÜNÜYOR?

ARAŞTIRMA MAKALESİ

ÖZ

Amaç: Online öğrenme, öğretmen ve öğrencinin fiziksel olarak ayrı ortamlarda olduğu kapsamlı bir eğitim türüdür. Fizyoterapi ve rehabilitasyon öğrencilerinin gözünden online öğrenmenin nasıl değerlendirildiğini öğrenmek istedik.

Yöntem: Fizyoterapi ve rehabilitasyon bölümünden 283 öğrenci dahil edildi. Öğrencilere 45 çoktan seçmeli soru ve 2 açık uçlu sorudan oluşan bir anket uygulandı. Öğrencinin daha önce herhangi bir online öğrenme programına katılıp katılmadığı, online öğrenmeye erişimi olup olmadığı ve erişim sırasında yaşanan teknik sorunlar ile ilgili sorular soruldu.

Sonuçlar: Çalışmamıza 210 (74,20%) kadın ve 73 (25,80%) erkek dahil edildi. Pandemi öncesi online eğitim alma durumunu sorguladık ve öğrencilerin %49,82'si daha önce online eğitim almadıklarını bildirdi. Öğrencilerin %21,55'inin kendilerini motive edemediğini gördük. Öğrencilerin %30,39'u çevrimiçi eğitim nedeniyle uygulamalı derslerde yetersiz eğitim aldığını düşünmektedir. Öğrencilerin %10,25'i çevrimiçi öğrenme için gerekli donanıma ulaşamadıklarını belirtmiştir. Online eğitim ile kaliteli eğitim aldıklarına ilişkin soruda; Öğrencilerin %21,55'i bu görüşe hiç katılmadığını belirtmiştir.

Tartışma: Bazı uygulamalı olmayan derslerin online ve senkronize, uygulamalı derslerin yüz yüze yapılmasının daha faydalı olduğunu düşünmekteyiz. Bu nedenle pandemi nedeniyle yüz yüze yapılamayan uygulamalı derslerin ertelenmesinin ve pandemi sürecinden sonra bu derslerin yüz yüze verilmesinin faydalı olacağını düşünmekteyiz.

Anahtar Kelimeler: Eğitim, Online Öğrenme, Öğrenci, Pandemi, Pratik Ders

INTRODUCTION

The World Health Organization (WHO) stated that Covid-19, which started to spread from China to the whole world on 30th January 2020, is a serious public health problem and was declared a global pandemic on 11th March 2020 (1,2). In Turkey, the first case and the first death were reported on 11th March and 17th March 2020, respectively. Until 9th September, the total number of people undergoing Covid-19 and who died due to Covid-19 were recorded as 284 943 and 6837, respectively (3). It is recommended to pay attention to social distance and avoid close contact to be protected from Covid-19, which is transmitted by the respiratory tract, spreads rapidly, and has high contagious properties (4). For this reason, public areas such as workplaces, schools, and universities were gradually closed within the scope of various precautions taken, and regions with a high number of patients were quarantined. The closure of universities, including physiotherapy departments, has led to online learning in many countries (5).

Online learning is a comprehensive type of education that includes new technological developments and presentation techniques from a very broad perspective in which the teacher and the student are physically separated (6,7). The student is considered to be the most important factor in achieving success in online education with a teacher (6). A student-based assessment approach is required to determine the effectiveness of any educational method that is applied (8). It is thought that this assessment should be made with evidence-based methods on subjects that may affect the education process and guide teachers such as accessing online learning materials, technical competence required to provide accessing, availability of technology by students and teachers, course design, teacher-student cooperation, student learning outcomes and the satisfaction in the education process (8,9). Although the effects of these changes regarding the teaching method are not fully known, teachers are still trying to get some solutions, especially regarding the efficiency of clinical practice (5,10). In addition to teachers, there are some uncertainties regarding the satisfaction of students studying in health sciences and their access to required technical equipment to follow online courses regularly (11,12).

As one of the precautions in our country due to the Covid-19 pandemic affecting the whole world, our university has switched to an online learning program, and courses have started to be taught online. Although departments that do not have a master-apprentice relationship and do not require direct application could teach their courses with online learning during the pandemic in the spring semester of 2020 successfully, unfortunately applied sciences had a lot of difficulties in this regard. Higher education of Health Sciences has a master-apprentice relationship and it is not possible for the student to learn the examination, treatment, and rehabilitation of the patient without touching. However, we had to complete the practical courses online due to the pandemic, which we were not prepared for (13,14).

In the 2020-2021 academic year, all universities in Turkey implemented the online education process. While some senior students in applied health sciences could do internships in hospitals, some could not. Students could not do internships in cities where the pandemic was intense (13,14). During this period, we observed that students' motivation and learning performance were extremely low. We planned this study because of the necessity to question the thoughts of health sciences students about online education and to plan the next education accordingly. It was thought that many sciences in Turkey will continue online education even after the pandemic. Although the theoretical part of the courses in applied health sciences could be given online, we thought that the practical part of the courses should be given face to face. However, the ratio of this should be adjusted by asking the opinions of students and lecturers. Our aim in this study was to know how online learning was evaluated through the view of physiotherapy and rehabilitation students.

METHODS

The study was carried out between June 2020 and December 2020 in Hatay Mustafa Kemal University, Faculty of Health Sciences, Department of

Physiotherapy and Rehabilitation. 430 students were invited and 283 bachelor's degree and master of science students accepted to participate the study. The study was a descriptive study. Some of questions were likert type, some of them were descriptive. An informed consent form containing information about the study was sent to the students, and consent was taken online (by WhatsApp application) from the students who agreed to participate in the study. Ethics committee permission required for the study was obtained from Hatay Mustafa Kemal University Ethics Committee (Ethical approval number: 04/06/2020-07-14).

A questionnaire that consisted of 45 multiple-choice questions and 2 open-ended questions was applied to the students. We prepared the questionnaire by Google forms and send it to the students by WhatsApp application. The questionnaire was formed from 4 parts such as:

1: Gender and educational status of the participants;

2: Questions related to participation in online learning and providing access to online education;

3: Questioning the quality and adaptation in education, effectiveness of the online learning, model, the motivation for the course, the availability of the required equipment, and the environment and questions about the teacher;

4: Questions related to the lesson processing and ideas about socializing.

The questions were about degree of the student's education, whether the student has previously participated in any online learning program, access problems to online learning, the quality of the online learning process, efficiency of the courses, the attitude of the teacher during online learning, the student-teacher relationship, the impact of online learning on student's social behavior, and the views on the similarities and differences between online learning and traditional education.

At the beginning of the study, all students were informed about the study and their questions about the purpose and method of the study were answered. The questions were recorded in the online system and sent to the students via an internet link to be answered, and the students' answers were recorded in the system.

The questions were created by the researchers since there was no scale developed on this subject at the time we conducted the study. The questions were formed by 5 physiotherapists (two of whom were academicians of at least 8 years) with professional experience ranging from 3 years to 15 years.

Statistical analysis

Statistical Package for Social Sciences (IBM SPSS Statistics for Windows, Version 22.0. Chicago, Illinois, USA) Software was used to analyze the data. Numbers and percentages were used to present the descriptive characteristics and answers of the students. A questionnaire was created and sent to all students belonging to Hatay Mustafa Kemal University physiotherapy and rehabilitation department (bachelor's degree), and health sciences institute physiotherapy and rehabilitation department (master of science), and all of them were invited to participate in the study. Therefore, sample size analysis was not performed when all of the target

Table 1. Gender and Educational Status of the Participants

		n	%
Gender	Female	210	74.20
	Male	73	25.80
Education Degree	Bachelor's Degree Class 1	71	25.09
	Bachelor's Degree Class 2	83	29.33
	Bachelor's Degree Class 3	65	22.97
	Bachelor's Degree Class 4	56	19.79
	Master of Science Course Period	7	2.47
	Master of Science Thesis Period	1	0.35

Table 2. Questions Related to Participation in Online Learning and Providing Access to Online Education

		n	%
Have you attended any online learning program before?	Yes	142	50.18
	No	141	49.82
Do you have a computer in your home?	Yes	182	64.31
	No	101	35.69
On which device do you follow your online learning lessons?	Computer	126	44.52
	Tablet	6	2.12
	Smartphone	151	53.36
Do you have any problems accessing the internet?	Always	24	8.48
	Often	73	25.80
	Sometimes	151	53.36
	Any time	35	12.37
How often do you use the university library's off-campus access service?	Everyday	6	2.12
	3-5 times a week	19	6.71
	1-2 times a week	235	83.04
	Never	23	8.13

population was invited to the study. But we analyzed the rate of the attending students over the total number of the students in the physiotherapy and rehabilitation department when we completed data collection.

RESULTS

The online education in our university was asynchronous. Our study included 210 (74.20%) female and 73 (25.80%) male students. We found that 25.09% of them were first-class, 29.33% of them were second-class, 22.97% of them were third-class, and 19.79% of them were fourth-class students in bachelor's degree. It was determined that 2.82% of the participants were master of science students (Table 1).

We questioned status of having online learning before the pandemic and 49.82% of the students reported that they did not receive online learning before. We found that 35.69% of the students did not have a laptop device to use during the online lessons in education; 53.36% of them followed up lessons with a smartphone; 25.80% of them stated that they often had problems with the internet (Table 2).

We questioned their ideas about online learning as an effective learning model. We found that 21.55% could not motivate themselves, and 29.68% were indecisive about motivation. We found that 10.25% of the students could not access the necessary equipment for online learning, and 44.52% of them stated that they had access. Most of them did not agree with the idea of "If I had online learning alternative in my department, I would prefer online learning" (Table 3).

In the study, 53.71% of the students stated the lecturer was enthusiastic about education and 49.82% agreed with the question that the lecturer informed the student sufficiently about online learning (Table 4).

It was determined that 30.39% of the students agreed with the idea of having insufficient education in the practical courses. There was a high rate of agreeing (I agree 32.51% and 17.67% absolutely agree) with the question that "online learning helps me to understand the subject better than face to face education because I can stop or watch the online learning videos where necessary" (Table 4).

In our study, we found that most of the students agreed that "online learning will prevent students'

Table 3. Questioning the Quality and Adaptation in Education, Effectiveness of the Online Learning, Model, the Motivation for the Course, the Availability of the Required Equipment, and the Environment and Questions About the Teacher

Questioning the Quality and Adaptation in Education, Effectiveness of the Online learning, Model, the Motivation for the Course, the Availability of the Required Equipment, and the Environment	**I do not agree at all**		**I do not agree**		**I am indecisive**		**I agree**		**I absolutely agree**	
	n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
Online learning is an effective learning model	45	15.90	73	25.80	98	34.63	58	20.49	9	3.18
I can motivate myself to start the lesson.	28	9.89	61	21.55	84	29.68	97	34.28	13	4.59
I can easily access the minimum necessary equipment for online learning.	29	10.25	54	19.08	48	16.96	126	44.52	26	9.19
I find it difficult to provide the appropriate environment for the lesson (desk, convenient time, noiseless environment, etc.).	38	13.43	86	30.39	41	14.49	76	26.86	42	14.84
If I had an alternative to online learning in my department, I would prefer online learning.	89	31.45	79	27.92	74	26.15	25	8.83	16	5.65
I think the department where I am currently studying is suitable for online learning.	120	42.40	75	26.50	67	23.67	19	6.71	2	0.71
I think online learning affects my eye health negatively.	16	5.65	70	24.73	64	22.61	81	28.62	52	18.37
I think I get a high-quality education with online learning.	61	21.55	87	30.74	92	32.51	39	13.78	4	1.41
I keep detailed notes during the online learning lecture.	20	7.07	56	19.79	66	23.32	111	39.22	30	10.60
I think I have been adapted to the online learning system.	42	14.84	54	19.08	90	31.80	88	31.10	9	3.18
I think my friends are adapting to the online learning system	51	18.02	63	22.26	117	41.34	48	16.96	4	1.41
Online learning is more motivating than a normal classroom environment.	89	31.45	81	28.62	60	21.20	40	14.13	13	4.59
I think one of the advantages of Online learning is that the contents (video, audio, ppt) can be accessed at any time.	11	3.89	9	3.18	42	14.84	150	53.00	71	25.09
I think that online learning is more advantageous than formal education, as more than one access to courses and documents with the same content can be provided at different times.	30	10.60	52	18.37	83	29.33	85	30.04	33	11.66
Questions About the Teacher										
The teacher was enthusiastic about training.	12	4.24	21	7.42	84	29.68	152	53.71	14	4.95
The teacher gave me enough information about online learning.	16	5.65	41	14.49	67	23.67	141	49.82	18	6.36
The presentation style of the teacher caught my attention.	21	7.42	57	20.14	96	33.92	98	34.63	11	3.89
The teacher was friendly towards the students during the lesson.	5	1.77	14	4.95	44	15.55	195	68.90	25	8.83
I can easily communicate with the teacher whenever I want.	24	8.48	48	16.96	84	29.68	106	37.46	21	7.42
In online learning, the teacher cannot effectively control the educational environment.	5	1.77	36	12.72	81	28.62	122	43.11	39	13.78

Table 4. Questions Related to the Lesson Processing and Ideas About Socializing

Questions Related to the Lesson Processing	I do not agree at all		I do not agree		I am indecisive		I agree		I absolutely agree	
	n	%	n	%	n	%	n	%	n	%
I have easy access to the university's online learning website.	15	5.30	47	16.61	55	19.43	132	46.64	34	12.01
Online learning lessons are as efficient as face to face education lessons	86	30.39	82	28.98	70	24.73	37	13.07	8	2.83
With online learning, students' success processes can be followed more easily.	70	24.73	100	35.34	70	24.73	33	11.66	10	3.53
I think that the online learning I received from the same teacher is more efficient than face to face education.	81	28.62	81	28.62	84	29.68	29	10.25	8	2.83
I think I received insufficient education in the practical courses in online learning.	4	1.41	25	8.83	78	27.56	86	30.39	90	31.80
Online learning provides me a better understanding of the subject than face to face training, as I can stop or watch the videos when I want.	19	6.71	34	12.01	88	31.10	92	32.51	50	17.67
In online learning, not being able to communicate with the teacher simultaneously during the lesson decreases my motivation.	10	3.53	47	16.61	66	23.32	110	38.87	50	17.67
Face to face interaction is required for the best training.	4	1.41	21	7.42	61	21.55	111	39.22	86	30.39
Since vocational education requires learning with practical applications, vocational education cannot be given by online learning.	2	0.71	20	7.07	47	16.61	102	36.04	112	39.58
I think that online learning can be used in teaching theoretical lessons after the pandemic.	13	4.59	28	9.89	64	22.61	119	42.05	59	20.85
I think that online learning can be used in practical lessons after the pandemic.	120	42.40	75	26.50	60	21.20	20	7.07	8	2.83
I follow course contents uploaded to the online learning system regularly.	9	3.18	55	19.43	71	25.09	120	42.40	28	9.89
Online learning can be easily applied to all levels of vocational education.	85	30.04	108	38.16	65	22.97	20	7.07	5	1.77
Ideas about Socializing										
Online learning negatively affects the student's life after graduation by preventing the student's participation in group work and taking responsibility.	10	3.53	48	16.96	81	28.62	80	28.27	64	22.61
Online learning prevents students from socializing.	12	4.24	51	18.02	39	13.78	105	37.10	76	26.86
As I communicate less with my friends in online learning, the sincerity between us decreases.	22	7.77	72	25.44	51	18.02	96	33.92	42	14.84
Since the day and time of the lesson are not known in online learning, I have difficulty starting the lesson.	11	3.89	68	24.03	46	16.25	103	36.40	55	19.43
Since online learning lessons are conducted in a shorter time and more intensively than formal education lessons; it contributes to me in terms of efficient use of time	20	7.07	41	14.49	92	32.51	107	37.81	23	8.13
I prefer online learning as there are no necessities required by the classroom environment (clothing, preparation of the class to start the lesson, no obligation to adapt to society, etc.).	37	13.07	58	20.49	77	27.21	79	27.92	32	11.31

participation in group work and taking responsibility and will affect the student's life after graduation negatively" (Table 4).

DISCUSSION

The effectiveness of the education provided in the digital environment was evaluated in our study. We questioned students who took the theoretical and practical courses with online learning for one semester and the results were examined.

Online education is a new practice in our country that comes with the pandemic. Especially in applied health sciences, the idea of online education has not been adopted by both the lecturer and the student. Therefore, in a short time, it was found that students had difficulty in adapting to online education, and both physical and motivational conditions forced students. In health education, even one single person's incomplete learning cannot be accepted. Therefore, even one person who cannot access online education due to inadequacies such as internet and laptop makes the applicability of online education questionable. We think that the students who switch to online education without preparation in the world and in our country may not be able to perform their previous performances because it is an unusual method even if their physical deficiencies are eliminated. Therefore, we think that face to face education should be started at the first opportunity allowed by pandemic conditions and the process of getting used to online education should be carried out during face to face education. As a matter of fact, the theoretical courses of health sciences can be given online, and practical courses can be given face to face.

The study was conducted in a state university. Because the education was asynchronous in most of the state universities in Turkey while foundation universities applied the lessons as synchronous. For synchronized training, students must have instant laptop and internet access. However, during the pandemic period, our students, who reached us by phone, stated that those living in the village went from the village to the city on a certain day of the week and accessed the records of the lessons in the internet café because they did not have laptop and internet at home. State university students have limited financial opportunities compared to foundation university students. It is obvious that synchronized education in public universities creates a disadvantageous situation for students who have to be at their family's house during the pandemic. Therefore, the asynchronous nature of online courses at state universities has created an advantage for disadvantaged students in terms of equality of opportunity. However, in synchronous education, the student-teacher relationship is more lively, and the student is more likely to like and understand the lesson, thanks to their communication. We think that the fact that the courses are given asynchronously in our university affects the results. If in our university lessons had been synchronized, it would have been expected that students who have the necessary equipment would have higher online education satisfaction.

Online learning process; It is based on the realization of learning through the combination of learner, teacher and course contents in different environments and through communication technologies (15). With the emergence of the Covid-19 pandemic in our country and in the world, the online learning process has been started as an urgent plan in order not to interrupt education. It is inevitable that this rapid transition process will bring along disruptions. It is very important to get feedback from students in order to improve the ongoing processes related to online learning.

We found that 35.69% of the students do not have laptop at home. In online learning, the teacher gives homework to the students that they can prepare only by laptop. Smartphones are suitable for watching the lessons but not suitable for preparing project and homework. So, this situation causes students to do insufficient, sloppy homework and sometimes to have others do it. Considering the students who do not have laptops, this situation causes the assessment and evaluation of the students to be insufficient and unhealthy. Most of the students agreed that physiotherapy and rehabilitation department was not suitable for online learning and do not agree with the idea online learning was an effective learning model. 29.33% of the students could not easily access the minimum necessary equipment for online learning. This is an im-

portant rate about which we cannot be insensitive. Physiotherapy and rehabilitation department is a practical, a vital part that deals with human health. Therefore, the education of every student is important. Even one student's graduation with incomplete education means risking the lives of patients. Therefore, the online learning in physiotherapy and rehabilitation department is considered not to be suitable for practical courses.

Students declared that they had motivation problems during the online learning and they do not rely on the education they get by online learning. One advantage of the online learning is that the contents (video, audio, ppt) can be accessed at any time. It is seen that half of the students participating in our study received online learning for the first time. The online learning systems that exist within universities differ. Unfamiliarity with the system can affect the process negatively. We think that the brochures, videos and visuals that will be prepared for students on how to use the system will contribute positively. Another factor that will provide motivation and student participation is the student's ability to access educational materials (16). As a result of our study, it was observed that 55.48% of the students were able to log into the system via tablet and smart phone, and 8.48% of the students always had problems with internet access. In this case, the important point is that there may be documents that they will not be able to access with their tablets and phones or they will not be able to access at all due to internet problems. Choy et al. reported that internet-related problems increase students' anxiety and decrease motivation (17). Lack of access to the course material for which the student is responsible reduces motivation and participation, as well as preventing effective measurement and evaluation.

Our study was carried out with students attending physiotherapy and rehabilitation department. Physiotherapy and rehabilitation department is largely based on skill and attitude teaching, and practical courses are predominant. As a result of the study, most of the students stated that online learning was not an effective method, and physiotherapy and rehabilitation department was not suitable for online learning. In a study published in 2014 on physiotherapy and rehabilitation department education, it was reported that the additional use of web-based learning in clinical learning was useful (18). In our study, students stated that it is not suitable to use as a single method.

When the participants were asked whether their friends adapted to online learning or not, the answer 'I am undecided' came to a great extent. This result shows that socialization has decreased and communication is weakened between students. One of the important factors of learning is peer interaction (19). Students can achieve permanent learning to a large extent by interacting with their peers as well as with tutorials and materials. Even if asynchronous applications are made in online learning, it is thought that giving homework such as projects, e-posters, and presentations that students can do as a team and keeping them in touch with their peers will be beneficial (20). By creating groups such as mail, social media, messaging applications, this process can be carried out more easily by the tutorial. The importance of timely and accurate feedback in order to provide students with the right knowledge and skills and to increase the retention of information has also been emphasized by studies (21,22). It is very important to ensure this by the teacher in asynchronous lessons and timely feedback can be provided with the specified tools. Some students were satisfied about saving time thanks to online learning. Most of them reported that online learning lessons are conducted in a shorter time and more intensively than formal education lessons. In formal education, it takes time and money to dress up and reach the campus. Considering this result, it should be noted that it would be beneficial to process some courses that can be taught online.

The students stated that their teacher tried to give the lessons in the best way and that the teachers were sincere and warm. Like students, teacher had difficulties to adapt due to their first online education, and especially elderly teachers who were far from technology had serious problems in the online education system, video recording, and course upload to the website. Despite this, they tried to motivate the students due to the pandemic and we found this situation was noticed by the students.

We found that most of the students think that on-

line learning lessons are not as efficient as face to face education lessons. Most of them prefer formal face-to face education more than online learning. Students reported that they think they received insufficient education in the practical courses with online learning. We think that it would be more beneficial to conduct practical lessons face to face and to conduct theoretical lessons synchronously online.

Our education system was asynchronous, so when we questioned the students about difficulty starting the lesson because of the day and time of the lesson not known in online learning, they stated that they have problems about this.

Another disadvantage of the online learning is preventing the students from socializing. Most of the students reported that online learning negatively affects the student's life after graduation by preventing the student's participation in group work and taking responsibility and prevents students from socializing. The university is not only an institution where the profession is learned, but also a place where personal development and friendships are provided. So face-to face learning has many advantages. Students think that online learning causes a decrease in the quality and efficiency of education and problems in measurement and evaluation compared to face to face education. It was emphasized that limited student-teacher interaction in online learning reduces motivation for the lesson. Despite these, although it seems disadvantageous, it is an important advantage that it allows the student to access the contents at any time in his / her daily schedule asynchronously. Henaku declared that college students experienced internet connectivity problems (23). We found that 21.91% of the students reported that website of the university was not easy to access. This is our take home message. We are planning to make our website better.

The limitation of our study is the small sample size. We conducted the study only at one state university. Planning future studies to include both foundation and state universities will provide a more detailed explanation of the situation in Turkey. Another limitation of our study is that graduate and undergraduate students were analyzed together. But master's degree courses are more appropriate to online education than bachelor's degree. Master of science student satisfaction might be higher than the other classes.

We have 430 students in the physiotherapy and rehabilitation department. We invited all of them to participate the study. But only 283 students of them accepted to participate (65.81% of the students participated the study). So power of the study is not as high as it should be, it is lower than 80%. So we would like to define because of the low power of our study, results should be interpreted carefully.

As a result, the pandemic process that emerged in our country at the beginning of 2020 and obliged universities to start urgent online learning in education has opened the door to a change in education for us (24). We think that the contribution of these results in the preparation of the educational contents that will be restructured by making more use of technology will be great. The preparation of new contents, taking into account the positive and negative feedback we have emphasized in the results of our study, will play an important role in increasing the quality and efficiency of education. As a result, we think that it is more beneficial to give some theoretical courses online and synchronized, and practical courses face to face. Therefore, we think that it will be beneficial to postpone the practical courses that cannot be done face to face due to the pandemic and to give those courses face to face after the pandemic process.

Contributiors: Concept – EDH; Supervision – EDH, YT; Resources and Financial Support – ÖG; Materials - EDH, SBa; Data Collection and/or Processing - IK, MŞF, BP, FEÇ; Analysis and/or Interpretation – FEÇ, SBe, ÖG, IK; Literature Research – EDH, EL, Sba; Writing Manuscript - EDH, YT, EL; Critical Review – BP, MŞF.

Declaration of interests: There is no conflict of interest to disclose.

Acknowledgements: We thank all the students who participated in this study.

Funding: There is no funding support for the study.

Informed Consent: The students included in the study were informed about the study's methodolo-

gy, and informed consent was obtained for participation in the study.

Ethical Approval: Approval for the study was granted by Hatay Mustafa Kemal University Non-Interventional Clinical Researches Ethics Board (Approval Date: 04.06.2020 and Approval Number: 04/06/2020-07-14).

REFERENCES

1. Mahase E. China coronavirus: WHO declares international emergency as death toll exceeds 200. BMJ. 2020;368:m408.
2. Cucinotta D, Vanelli M. WHO Declares COVID-19 a Pandemic. Acta Biomed. 2020;91(1):157–60.
3. Turkish Health Ministry. (2020, September 10). Statistics of COVID-19 pandemic. https://covid19.saglik.gov.tr/
4. World Health Organization. (2020, September 10) Coronavirus disease 2019 (COVID-19) Situation Report 46. https://www.who.int/docs/default-source/coronaviruse/situation reports/20200306-sitrep-46-covid-19.pdf?sfvrsn=96b04adf_4
5. Paraskevopoulos E, Papandreou M. Physiotherapy clinical placement during the COVID-19 pandemic. Educ Health (Abingdon). 2020;33(1):30–31.
6. Palloff R, Pratt H. Lessons from the cyberspace classroom: The realities of online teaching. San Francisco: Jossey-Bass; 2001.
7. Appana S. A review of benefits and limitations of online learning in the context of the student, the instructor, and the tenured faculty. International Jl. on E-Learning 2008;7(1), 5-22.
8. Patterson BJ, Krouse AM, Roy L. Student outcomes of distance learning in nursing education: An integrative review. CIN: Computers, Informatics, Nursing. 2012;30(9):475–88.
9. Billings DM. A framework for assessing outcomes and practices in web-based courses in nursing. J Nurs Educ. 2000 Feb;39(2):60–7.
10. MacDonald CW, Lonnemann E, Petersen SM, Rivett DA, Osmotherly PG, Brismée JM. COVID 19 and manual therapy: international lessons and perspectives on current and future clinical practice and education. J Man Manip Ther. 2020;28(3):134–45.
11. Hashim A, Mustafa I, Shahid S, Butt SS, Ali A. Student's satisfaction in online education programs among undergraduate physiotherapy students of Lahore during covid-19. RMJ. 2020;45(3):3.
12. Zhou T, Huang S, Cheng J, Xiao Y. 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. Telemed E-Health. 2020;26(5):584–8.
13. Baykal D, Koc Tutuncu S. Online education experiences of the students studying in health care departments during the covid-19 pandemic. Turkish Online Journal of Distance Education-TOJDE. 2022; 23,131-143.
14. Sahin M. Opinions of university students on effects of distance learning in Turkey during the Covid-19 pandemic African Educational Research Journal. 2021; 9(2), 526-543. DOI: 10.30918/AERJ.92.21.082.
15. Rumble G. The planning and management of distance education. 2019.
16. Van Bruggen J. Theory and practice of online learning. Br J Educ Technol. 2005;36(1):111–2.
17. Choy S, McNickle C, Clayton B, National Centre for Vocational Education Research L. Learner expectations and experiences an examination of student views of support in online learning. Australia: ERIC Clearinghouse; 2002.
18. Van Duijn AJ, Swanick K, Donald EK. Student learning of cervical psychomotor skills via online video instruction versus traditional face-to-face instruction. J Phys Ther Educ. 2014;28(1):94–102.
19. Kuo Y-C, Walker AE, Belland BR, Schroder KEE. A predictive study of student satisfaction in online education programs. IRRODL. 2013;14(1):16.
20. Karabatak S, Alanoglu M, Karabatak M. Effects of homework supported distance education on academic satisfaction, academic achievement, and attitude towards distance education. In: 2020 8th International Symposium on Digital Forensics and Security (ISDFS). Beirut, Lebanon: IEEE; 2020. p. 1–5. https://doi.org/10.1109/ISDFS49300.2020.9116372
21. Kreonidou G, Kazamia V. Assignment feedback in distance education: How do students perceive it?. Res Pap Lang Teach Learn. 2019;10(1):134-153.
22. Panigrahi R, Srivastava PR, Sharma D. Online learning: Adoption, continuance, and learning outcome—A review of literature. Int J Inf Manage. 2018;43:1–14. https://doi.org/10.1016/j.ijinfomgt.2018.05.005
23. Adu Henaku E, Agormedah EK, Ayite DMK, Apori Ansah E. Online learning in higher education during COVID-19 pandemic: A case of Ghana. JETOL. 2020;3(3):183-210. https://doi.org/10.31681/jetol.726441
24. Telli SG, Altun D. Coronavirüs ve Çevrimiçi (Online) Eğitimin Önlenemeyen Yükselişi. Üniversite Araştırmaları Dergisi. 2020;3(1):25–34. https://doi.org/10.32329/uad.711110