







UNIVERSITY STUDENTS' VIEWS ON DISTANCE EDUCATION IN HEALTH IN THE COVID-19 PANDEMIC

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ABSTRACT

Objective: This study was planned to evaluate the thoughts of university students about the change in their education and the stress burden caused by education.

Methods: The research is descriptive and was conducted with students studying at the Faculty of Health Sciences, Nursing, Midwifery, Physiotherapy and Rehabilitation Departments at state universities in Turkey between May and June 2020. Data were collected with the "Personal Information Form", "Nursing Education Stress Scale" and "Depression Anxiety Stress Scale short form".

Results: While the mean age of the participants was 20.77 ± 1.67 (16-35 years), the DASS-21 total score was found to be 16.36 ± 13.301 NESS total score, 43.39 ± 25.13 points, when the scores of the students from the scale scores were examined. It was determined that the DASS-21 and NESS scale scores showed high statistical significance with the increase in the time spent at the screen outside of the classroom hours. In addition, the majority of the students stated that the negative features of distance education are more.

Conclusion: In the pandemic process, instead of formal education, distance education is actually suitable for use in the field of health sciences when conditions such as adequate infrastructure, trainer support, and sufficient material support are provided; Since all these infrastructure services have not been adequately established in all higher education institutions in Turkey, it is seen that students cannot benefit from this education effectively enough in general.

Keywords: Covid-19, Depression, Health sciences, Stress, Distance education

Covid- 19 Pandemisinde Üniversite Öğrencilerinin Sağlıkta Uzaktan Eğitime Bakışları

ÖZET

Amaç: Bu çalışma üniversite öğrencilerinin eğitimlerindeki değişim hakkındaki düşüncelerinin ve eğitimden kaynaklı stres yükünün değerlendirilmesi amacıyla planlanmıştır.

Yöntem: Araştırma tanımlayıcı nitelikte olup Mayıs-Haziran 2020 tarihleri arasında Türkiye’de ki devlet üniversitelerinde Sağlık Bilimleri Fakültesi Hemşirelik, Ebelik, Fizyoterapi ve Rehabilitasyon Bölümleri’nde

eğitim gören öğrencilerle yapılmıştır. Veriler “Kişisel Bilgi Formu”, “Hemşirelik Eğitimi Stres Ölçeği” ve “Depresyon Anksiyete Stres Ölçeği kısa formu” ile toplanmıştır.

Bulgular: Katılımcıların yaş ortalaması $20,77 \pm 1,67$ (16-35yaş) iken, ölçek puanlarından öğrencilerin aldığı puanlar incelendiğinde DASS-21 toplam puanı $16,36 \pm 13,301$ HESÖ toplam puanı ise $43,39 \pm 25,13$ puan olarak bulunmuştur. Ekran başında ders saati haricinde geçirilen sürenin artması uzaktan eğitim için ekran başında kalma süresinin artması ile DASS-21 ve HESÖ ölçek puanlarının ileri düzeyde istatistiksel anlamlılık gösterdiği saptanmıştır. Ayrıca öğrencilerin çoğunluğu uzaktan eğitimin olumsuz özelliklerinin daha fazla olduğunu belirtmişlerdir.

Sonuç: Pandemi sürecinde örgün eğitimin yerine, uzaktan eğitimin sağlık bilimleri alanında aslında yeterli alt yapı, eğitmen desteği, yeterli materyal desteği gibi şartlar sağlandığı zaman kullanıma uygun olduğu; tüm bu alt yapı hizmetlerinin Türkiye’deki bütün yükseköğretim kurumlarında yeterince oluşturulamamış olması nedeni ile öğrencilerin bu eğitimden genel olarak yeterince etkin fayda sağlayamadıkları görülmektedir.

Anahtar Kelimeler: Covid-19, Depresyon, Sağlık bilimleri, Stres, Uzaktan eğitim

1. INTRODUCTION

Since the first reports of new pneumonia in Wuhan, China's Hubei province [1], the covid-19 outbreak continues to spread rapidly around the world. The World Health Organization declared on March 11 that the covid-19 epidemic, which is an important problem that threatens public health significantly due to the increasing worldwide spread of the virus, can be defined as a pandemic [2,3]. With the rapid increase of this epidemic, it has caused significant changes in education systems on a global scale. According to data published by the United Nations Educational, Scientific and Cultural Organization (UNESCO), schools were closed in 186 countries and 1.19 billion students were affected by this situation [4]. However, in order to reduce the spread of the virus and the victimization in education, the Council of Higher Education in our country announced that education and training in universities was suspended for three weeks as of March 16, 2020 [5]. On March 26, 2020, it was announced that there will be no face-to-face classes in the spring semester of the 2019-2020 academic year due to the uncertainty of the pandemic process. Thus, distance education came to the fore in universities in Turkey. In addition, within the scope of a three-week period by the Council of Higher Education, it was decided to suspend the education of associate and undergraduate students who have internship, internship and applied education from health, teaching, science and engineering programs, as well as all associate and undergraduate students attending formal education programs with this, formal programs were blocked [6].

In this process, the training of formal education institutions in many countries, including our country, has been switched to the distance education system. With distance education, students continue their education at home. However, health-related education is an education that includes theoretical and applied teaching and learning, is based on the acquisition / application of theoretical knowledge and skills, and integrated with the skills of observation and interpretation [7]. Although there are many technologies for distance education that provide education and training opportunities apart from place and time, these technological systems and tools also determine the quality of learning [8]. However, these technologies can cause many problems such as download errors, installation, login, audio and video problems [9]. Along with the problems that technological tools can bring, there may also be many problems arising from the individual himself. As a result of the constant stay at home and the decrease in social relations due to the pandemic process, individuals face problems such as depression, anxiety, fear, especially fear of death, anxiety of not getting adequate health care, and sleep problems [10]. In the study of Li et al., the psychological state of the people after learning about the pandemic was evaluated and they stated that negative emotions such as intense anxiety, depression, and anger were increasing in general. In addition, it was stated that individuals' life satisfaction decreased and their health-related anxiety levels increased [11]. According to a study conducted on 253 people, it was determined that 7% of individuals had stress symptoms during the Covid-19 pandemic [12]. In studies measuring stress level, when undergraduate students and nursing students were compared, it was reported that the risk of developing mental health problems in nursing students was higher [13,14]. In addition to the physical damage caused by the Covid-19 pandemic, it is obvious that it has affected students who are physically active in many ways, especially with the addition of the curfew.

It is not desired to see an increase in psychological health problems during this pandemic process. Accordingly, intensive studies are carried out to investigate the pathophysiology, clinical results and treatment of Covid-19. The psychological effects of the pandemic on future job candidates and nurses, midwives and physiotherapists, who have important roles in health,

cannot be ignored as an important gap for this research. For this reason, it is thought that this study is important to examine especially on health sciences faculty students, who are future profession candidates, and it can be a source in terms of offering solutions to possible epidemics in the future. In addition, the absence of a study evaluating the mental health of students in the early period during this epidemic is another unique aspect of the study. Based on these results, the research shows that students of the faculty of health sciences, who are still receiving education during the current covid-19 pandemic, will take part in the provision of health services in the next period. This study emerged from the necessity of evaluating the students' thoughts about the change in their education and the stress burden arising from education. The aim of this study is to evaluate the thoughts of university students about the change in their education and the stress burden caused by education.

2. MATERIALS AND METHODS

Type of Research

The research was conducted in a descriptive manner with an online questionnaire with students studying at the Faculty of Health Sciences, Nursing, Midwifery, Physiotherapy and Rehabilitation Departments at state universities in Turkey between May and June 2020.

Population and Sample of the Research

In the research, an online questionnaire was sent to undergraduate students, no sample selection was made and it was aimed to reach all students. There were 2897 students who accepted to fill out the online questionnaire, and six questionnaire forms, which were found to be incompletely filled and inconsistent answers to the questions, were excluded from the evaluation. The sample of the study consisted of 2891 students (first year: 677 students, second year: 931 students, third year: 1131 students, fourth year: 152 students) studying in undergraduate programs of health sciences faculties in the 2019-2020 academic year.

Data Collection

The study was carried out online between May and June 2020. After the students entered the survey, they were able to see the questions in four sections, and after each section, they clicked the "next" button and moved on to the next section. The first part consisted of the informed consent form and the electronic consent question, the second part consisted of the Personal Information Form, the third part consisted of the Nursing Education Stress Scale, and the fourth part consisted of the Depression Anxiety Stress Scale short form. After the data collection tools of the research were prepared through Google forms and necessary information was given, they were shared via the social media groups of the students. Within the scope of the study, it was ensured that the same participants filled out the survey again by signing in to Google.

Data Collection Tools

“Personal Information Form”, “Nursing Education Stress Scale” (NESS) and “Depression Anxiety Stress Scale short form (DASS-21)” were used in the study and data collection.

Personal Information Form

This form was created by the researchers. In the personal information form, there are questions such as age, gender, department, what grade he is in, the existence of regular contact groups

and the status of receiving psychological support before the pandemic. In addition, there are questions about evaluating distance health education in the Covid-19 period and questions about determining emotions, which were created by researchers by scanning the literature in this area [15-17].

Nursing Education Stress Scale (NESS)

It was modified from the Nurse Education Stress Scale developed by Gray-Toft and Anderson (1981) and developed by Rhead (1995) [18,19]. In the original scale study by Rhead (1995), Factor 1 (Application stress) accounted for 20.3% (eigenvalue 6.51) of the total variance, Factor 2 (Academic stress) 9.9% (eigenvalue 3,17) and Factor 3 (pain and death in nursing) sub-dimensions accounted for 6.9% of the total variance (eigenvalue 2.20). In the study, the NESS scale was evaluated as a 3-factor structure, but then a 2-factor structure was accepted as Factor 1 (Application stress) and Factor 2 (Academic stress). The scale, which consists of 32 items in total, is in four-point Likert type (0 -3 points) and consists of two sub-dimensions of 16 questions. The total score of the Scale, which has a value between 0-48 for each sub-dimension, is between 0-96, and an increase in the score indicates an increase in stress. Its Turkish validity and reliability were performed by Karaca et al. in 2014 [7]. The scale is in a structure that can evaluate all the students of the Nursing, Midwifery and Physiotherapy departments within the Faculty of Health Sciences.

Depression Anxiety Stress Scale short form (DASS-21)

The scale developed by Lovibond and Lovibond in 1995 consists of 42 items and 3 sub-dimensions [20]. The scale has a 4-point Likert-type rating of 0 “not at all suitable for me” and 3 “completely suitable for me”. The idea that shorter forms of this scale could also perform the same measurement was put forward in 1997 [21]. The 21-question short form (DASS-21) created by Henry and Crawford includes 7 questions each to measure the dimensions of depression, stress and anxiety [22]. DASS-21 short form is a 4-point Likert-type scale scored between 0-3. The DASS-21 short form, like the long form, consists of 3 sub-dimensions: Anxiety (DASS-21A), Depression (DASS-21D) and Stress (DASS-21S). The lowest score for each sub-dimension is 0, and the highest score is 21. The validity and reliability study of the DASS-21 scale was carried out by Yılmaz et al. in 2017 and adapted to the Turkish society [23].

Application of Research

Before filling out the data collection tools, information about the study was given on the first page of the online link, and if they agreed to participate in the study, they were asked to mark the statement "I consent to participate in the study". It was explained to the students that they have the right to leave at any stage of the study, and it was stated that participation in the study was on a voluntary basis. Students who completed the form online were deemed to have accepted to participate in the research. There is no conflict of interest between researchers and students.

Evaluation of Data

Data were evaluated with descriptive statistics, t-test, One-Way Analysis of Variance using SPSS 22.0 statistical package program. A p value less than 0.05 was considered statistically significant.

3. FINDINGS

A total of 2891 Health Sciences Faculty students participated in the study. While the mean age of the participants was 20.77 ± 1.67 (16-35 years), the DASS-21 total score was found to be 16.36 ± 13.301 NESS total score, 43.39 ± 25.13 points when the scores of the students from the scale scores were examined (Table 1).

Tablo 1. Minimum Maximum and Average Values of Scales Applied to Students

Scales used	Min-Max .	Mean \pm standard deviation
DASS-21	0-63	16.36 ± 13.301
DASS-21A	0-19	3.17 ± 3.69
DASS-21D	0-21	6.45 ± 5.99
DASS-21S	0-21	6.73 ± 5.71
HESO	0-96	43.39 ± 25.13
Factor-1	0-48	21.05 ± 13.20
Factor-2	0-48	22.35 ± 12.58

The most frequent answers to the question of "what do students lose in the distance education process" were evaluated (Table 2). It was determined that the most disturbing situation for the students was not being able to go to the practice (34.60%) even though they were students of a profession with applied education. Students who think that they are deprived of conscious learning skills (10.70%) emphasized that they could not adapt to the fact that all responsibility was left to them during their education life as the reason for this. Also, loss of discipline/enthusiasm to learn/regular study (9.40%); They stated that attention/permanent learning skills (7.20%) and efficient learning (7.20%) were lost. Students who support their social life at the university and think that they have improved their social skills stated that they have lost their social life and thus the personal development gains they will experience (8,40%).

Tablo 2. The Responses of the Students to the Question 'What They Lost in the Distance Education Process'

Answers given	n	%
I didn't lose anything	158	5.50
I lost everything	153	5.30
Applications	1000	34.60
Social life	244	8.40
Ability to ask questions	82	2.80
My institution and my institutionalism	34	1.20
Discipline, enthusiasm, order	272	9.40
Attention, Persistent learning ability	208	7.20
Communication	104	3.60
Note-taking skill	11th	0.40
Time	22	0.80
Conscious learning ability	308	10.70
Yield	213	7.40
Psychology	19	0.70
Internet	27	0.90
Quality	12	0.40
Equality	5	0.20
Motivation	19	0.70
Total	2891	100.00

The socio-demographic data of university students and their scale scores were compared and evaluated (Table 3). Accordingly, there is no significant relationship between the department of health sciences students and the DASS21 and NESS scale scores ($p > 0.05$). However, a significant correlation was found between having a female gender and DASS21-D score ($p = 0.019$). There was a significant relationship between the class of education and the total scores and sub-dimensions of both scales ($p < 0.05$). While the students who got the lowest score in NESS total score and subscale scores were 1st year students, the lowest score in DASS-21 scale score was found in 2nd grade students ($p < 0.05$). DASS-21 and DASS-21 D scores of students with extended family structure were found to be significantly lower than those with

nuclear family structure ($p<0.05$). DASS-21 D score was found to be highly statistically significant ($p<0.001$). When the DASS-21 and NESS total scores and sub-scores of the students who received psychological support in the past were compared with the students who did not receive psychological support in the past, a significant difference was observed ($p<0.001$).

Tablo 3. DASS-21 and NESS Scores of University Students According to Some Descriptive Characteristics

Demographic features		Number	%	DASS-21	DASS-21A	DASS-21D	DASS-21S	NESS	NESS Factor-1	NESS Factor-2
Gender	Woman	2465	85.30	16.53±13.38	3.18±3.70	6.55±6.05	6.79 ±5.71	43.58±25.10	21.17±13.21	22.43±12.52
	Male	426	14.70	15.37±12.82	3.09±3.62	5.85±5.63	6.42 ±5.71	42.26±25.42	20.36±13.10	21.8±12.85
t/p				1.654/0.098	0.487/0.626	2.350/ 0.019	1.193/0.233	1.005/0.315	1.164/0.244	0.806/0.0420
Section	Midwifery	1245	43.10	16.77±13.34	3.21±3.69	6.66±6.06	6.90 ± 5.68	43.41±24.69	20.97±12.97	22.45±12.37
	Physical therapy and rehabilitation	718	24.80	16.42±13.51	3.26±3.77	6.42±5.96	6.74±5.75	43.43±24.69	21.20±13.01	22.23±12.32
	Nurse	928	32.10	15.55±13.16	2.98±3.57	6.12 ± 5.92	6.43 ±5.73	43.29±25.50	20.98±13.82	22.33±13.25
F/p				1.970/0.140	1.304/0.273	1.812/0.164	1.517/0.220	0.008/0.992	0.094/0.911	0.084/0.0920
Class	1st Class	677	23.40	16.32±14.28	3.05±3.97	6.67±6.21	6.60±6.03	39.12±25.09	18.61±13.44	20.51±12.39
	2. Class	931	32.20	15.41±12.33	3.06±3.35	5.95±5.67	6.40±5.22	43.17±24.88	20.98±13.00	22.18±12.40
	3rd Class	1131	39.10	17.15±13.9	3.27±3.77	6.78±6.23	7.08±5.92	46.24±25.20	22.60±13.08	23.65±12.74
	4th grade	152	5.30	16.40±12.04	3.59±3.76	6.06±4.95	6.74±5.51	42.58±24.00	20.86±12.57	21.72±12.74
F/p				2.903/ 0.034	1.485/0.219	3.822/ 0.010	2.647/ 0.047	11.512/ 0.000	13.111/ 0.000	9.133/ 0.000
Family type	Nuclear family	2482	85.90	16.58 ±13.67	3.16 ±3.75	6.63 ±6.19	6.79 ± 5.81	43.58 ±25.53	21.10 ±13.41	22.49 ±12.76
	Traditional/ Extended family	409	14.10	14.95 ±10.72	3.21 ±3.29	5.38 ±4.81	6.37 ± 5.05	42.22 ± 22.69	20.73 ± 11.82	21.48 ±11.34
t/p				2.730/ 0.006	-0.241/0.809	4.658/ 0.000	1.553/0.121	1.102/0.271	0.575/0.565	1.622/0.105
Support in the past	There is	367	12.70	24.56 ± 16.08	5.65 ± 5.23	9.37 ± 6.79	9.54±6.54	51.52±24.26	24.61±12.84	26.92±12.17
	no	2524	87.30	15.16±12.40	2.81±3.25	6.32±5.74	6.32±6.47	42.20±25.05	20.53±13.17	21.68±12.49
t/p				10.742/ 0.000	10.117/ 0.000	8.894/ 0.000	8.961/ 0.000	6.687/ 0.000	5.661/ 0.000	7.528/ 0.000

Students' online education usage information was compared with DASS-21 and NESS scale scores (Table 4). The HESQ subscale scores of the students who did not have a computer at home were found to be significantly lower ($p=0.001$). The majority of the students stayed in front of the screen for 1-3 hours before the Covid-19 process (48.50%); After the pandemic process, it was determined that the majority (39.40%) of those who spent 1-3 hours in front of the screen except for the lesson time. While 50.60% of the students stated that they were in front of the screen for 1-3 hours for distance education, only 1.10% stated that they had to stay in front of the screen for more than 10 hours. It was determined that the DASS-21 and NESS scale scores showed high statistical significance with the increase in the time spent at the screen outside of the classroom hours and the increase in the time spent in front of the screen for distance education. While the majority of the students (62.30%) think that not being able to practice will cause more problems in the future, the scale scores obtained in this case show a statistically significant high. While 51.70% of the students studying in faculties of health sciences stated that they liked the practical training they received from a distance, the DASS-21 and NESS total scores and subscale scores of those who did not like the education and stated that the environment in which they continued their education was not suitable for education were found to be significantly higher at an advanced level ($p<0.001$). In addition, DASS21 scale scores increased significantly in case the screen size on which they had to follow the training was reduced.

Table 4. Mean DASS-21 and NESS Scores of Health Field Students According to Online Education Usage Information

Demographic features		Number	%	DASS-21	DASS-21A	DASS-21D	DASS-21S	NESS	NESS Factor-1	NESS Factor-2
Computer at home	There is	2167	75.00	16.27±13.24	3.17±3.83	6.32±5.91	6.76±5.58	44.28 ±25.34	21.51 ±13.39	22.78 ±12.59
	no	724	25.00	15.16±12.40	2.81±3.25	6.32±5.74	6.32±6.47	42.20 ±25.05	20.53 ±13.17	21.68 ±12.49
t/p				-0.630/0.529	0.145/0.885	-1.958/0.050	0.501/0.616	3.391/0.001	3.353/0.001	3.273/0.001
Time spent in front of the screen before the Covid-19 process	less than 1st	643	22.20	16.15±12.94	2.88±3.35	6.71±6.16	6.55±5.95	40.88±26.38	19.49±14.02	21.39±13.02
	1-3 hours	1402	48.50	16.21±13.33	3.12±3.69	6.37±5.98	6.72±5.58	42.45±23.77	20.73±12.53	21.74±11.89
	4-6 hours	618	21.40	16.85±14.09	3.57±4.07	6.23±6.05	7.04±5.83	45.66±26.79	22.23±13.95	23.43±13.36
	7-10 hours	163	5.60	17.77±12.22	3.47±3.61	7.09±5.54	7.20±5.53	50.62±24.31	24.63±12.02	25.98±12.69
	more than 10 hours	65	2.20	13.21±10.43	2.49±2.89	6.01±5.11	4.71±4.95	48.45±22.23	23.07±11.43	25.37±11.82
F/p				1.658/0.157	3.744/0.005	1.132/0.339	2.935/0.000	7.424/0.000	7.140/0.000	7.276/0.000
How many hours per day do you spend in front of the screen on average, excluding your lesson hours?	less than 1st	493	17.10	14.46±12.77	2.47±2.77	5.84 ±6.20	6.15 ±5.82	39.37±24.52	18.82±13.05	20.54±12.43
	1-3 hours	1140	39.40	14.47±12.69	3.07±3.71	5.48 ±5.55	5.91 ±5.38	42.46±25.78	20.60±13.45	21.83±12.85
	4-6 hours	843	29.20	18.45±13.44	3.51±3.98	7.46 ±6.11	7.47 ±5.62	45.38±23.49	22.10±12.61	23.25±11.50
	7-10 hours	309	10.70	19.96±14.24	3.91±3.86	7.68 ±6.29	8.34 ±6.14	46.64±27.10	22.91±13.62	23.73±13.92
	more than 10 hours	106	3.70	18.27±13.44	2.63±3.59	7.94 ±5.71	7.69 ±6.35	46.92±25.21	22.41±12.93	24.50±13.06
F/p				20.227/0.000	10.531/0.000	20.067/0.000	17.996/0.000	6.689/0.000	7.047/0.000	5.763/0.000
In front of the screen on average for distance education?	less than 1st	460	15.90	18.49±13.79	3.83±4.39	7.29±6.06	7.37±5.67	41.40±25.90	20.06±13.47	21.40±13.06
	1-3 hours	1464	50.60	15.83±13.27	2.97±3.50	6.28±5.92	6.57±5.80	43.16±25.04	21.08±13.18	22.08±12.46
	4-6 hours	765	26.50	14.45±11.84	2.83±3.46	5.72±5.53	5.89±5.08	43.57±24.90	20.77±13.01	22.80±12.48
	7-10 hours	169	5.80	21.20±14.72	4.24±3.82	7.90±7.03	9.05±5.95	46.85±23.29	23.86±12.31	22.99±11.41
	more than 10 hours	33	1.10	28.79±16.48	4.92±2.98	11.30±8.15	12.51±7.38	58.48±28.14	25.24±16.39	33.24±13.46
F/p				20.775/0.000	11.971/0.000	13.429/0.000	21.876/0.000	4.546/0.000	3.478/0.000	7.427/0.000
How long should a course hour (45 minutes in formal education) be in distance education ?	under 10 minutes	63	2.20	20.65±16.25	2.77±3.99	9.12±7.44	8.74±7.01	36.95±33.86	17.81±16.46	19.14±17.55
	10-20 minutes	436	15.10	18.79±14.25	3.54±3.78	7.59±6.44	7.65±6.13	49.69±23.05	23.71±12.65	25.98±11.42
	20-30 minutes	1204	41.60	17.14±13.05	3.24±3.71	6.93±6.10	6.96±5.59	43.78±25.71	21.17±13.36	22.63±12.92
	30-40 minutes	808	27.90	15.11±12.94	3.34±3.76	5.66±5.51	6.10±5.57	43.15±25.50	21.17±13.59	21.98±12.52
	40-50 minutes	380	13.10	13.00±12.21	2.23±3.13	4.82±5.19	5.94±5.38	36.46±20.96	17.88±10.93	18.58±10.49
F/.				14.442/0.000	8.045/0.000	20.080/0.000	9.683/0.000	15.472/0.000	11.045/0.000	19.451/0.000
Application problem	Yes	1800	62.30	17.81±13.55	3.34±3.78	7.04±6.18	7.43±5.92	45.40±25.46	22.04±13.37	23.39±12.70
	No	1091	37.70	13.95±12.52	2.89±3.51	5.47±5.54	5.59±5.16	40.06±24.28	19.47±12.75	20.62±12.16
t/p				7.790/0.000	3.220/0.001	7.081/0.000	8.789/0.000	3.561/0.000	5.042/0.000	5.768/0.000
Appreciation of the remote education application	Yes	1496	51.70	14.36±12.35	2.96±3.55	5.31±5.47	6.09±5.25	41.49±24.77	20.37±13.04	21.11±12.28
	No	1395	48.30	18.49±13.94	3.39±3.81	7.66±6.29	7.43±6.09	45.30±25.38	21.78±13.33	23.67±12.76
t/p				-8.392/0.000	-3.167/0.002	-10.659/0.000	-6.327/0.000	-4.220/0.000	-2.852/0.004	-5.497/0.000
Suitability of the distance learning environment	Yes	1404	48.60	13.46±11.59	2.78±3.36	5.06±5.14	5.61±5.01	40.49±23.95	19.95±12.69	20.06±11.83
	No	1487	51.40	19.09±14.20	3.53±3.93	7.75±6.43	7.79±6.11	46.13±25.94	22.09±13.58	24.06±13.01
t/p				-11.712/0.000	-5.553/0.000	-12.470/0.000	-10.529/0.000	-6.072/0.000	-4.366/0.000	-7.628/0.000
On which vehicle do you follow your lessons with distance education?	Computer	459	15.90	14.33±11.03	2.49±3.10	5.90±5.31	5.93±5.28	45.41±27.62	22.13±14.63	23.27±13.18
	Laptop	1156	40.00	15.62±13.32	3.27±3.84	5.76±5.73	6.59±5.48	44.08±23.69	21.23±12.65	22.85±11.88
	Mobile phone	1248	43.20	17.71±13.91	3.28±3.70	7.29±6.38	7.14±6.04	41.92±25.56	20.43±13.15	21.50±12.80
	Tablet	28	1.00	19.14±12.78	5.42±3.64	6.14±5.08	7.57±4.70	46.85±18.40	23.14±10.94	23.71±7.80
F/p				9.538/0.000	9.397/0.000	14.617/0.000	5.604/0.001	2.873/0.035	2.228/0.083	3.422/0.017

The answers given by the students to the questions asked to evaluate their views on distance education were examined and each question was compared with the scale scores (Table 5). The majority of the students stated that the negative features of distance education are more. With distance education, their interest in field courses increased (67.60), it contributed to increasing their sense of curiosity (67.80), learning became easier (58.70), motivation was provided (65.50), vocational training relieved them without having to go to practice (% 82.90), do not think that their professional competence will increase (83.60%) and their time management skills will increase (47.30) without seeing a clinic in professional practice. When the answers to these questions are examined, more than half of the students are of the opinion that distance education and not being able to go to practice negatively affect their education life and professional skill development. When the answers given to these questions were compared with the DASS-21 and NESS scale scores, it was observed that negative thoughts significantly increased the scale scores.

Table 5. Comparison of Students' Opinions about Distance Education Process with Scale Total Scores
Evaluations about distance education

Matter numbers		me ever Not available	Somewhat Suitable For Me	Usually Fits Me	To me Completely Appropriate	HESO KW/p	DASS-21 KW/p
one	I would like to continue the course with distance education	1196(41.40)	1038(35.90)	471(16.30)	186(6.40)	3.440/0.016	25.089/0.000
2	Distance education is suitable for use for many courses	1051(36.40)	1095(37.90)	519(18.00)	226(7.80)	6.117/0.000	31.008/0.000
3	Easier to learn with distance education	1683(58.20)	768(26.60)	294(10.20)	146(5.10)	15.229/0.000	15.403/0.000
4	With distance education , people become lazy , including me.	439(15.20)	557(19.30)	863(29.90)	1032(35.70)	39.052/0.000	33.376/0.000
5	My interest in my field courses increased with distance education.	1953(67.60)	582 (20.10)	227 (7.90)	129 (4.50)	10.191/0.000	17.383/0.000
6	With distance education, my sense of curiosity developed more.	1959(67.80)	571(19.80)	200(6.90)	161(5.60)	10.516/0.000	17.514/0.000
7	Teachers' efforts increased with distance education	673(23.30)	1029(35.60)	813(28.10)	376(13.00)	4.483/0.004	8.037/0.000
8	The quality of the education I received increased with distance education.	1944(67.20)	613(21.20)	235(8.10)	99(3.40)	16.820/0.000	20.628/0.000
9	The course materials delivered to me with distance education are interesting.	1583(54.80)	775(26.80)	398(13.80)	135(4.70)	4.326/0.003	10.768/0.000
10	The course content used with distance education is of sufficient quality.	969(33.50)	1085(37.50)	638(22.10)	199(6.90)	1.929/0.123	24.430/0.000
11th	I am more motivated to lessons with distance education.	1893(65.50)	643(22.20)	249(8.60)	106(3.70)	15.889/0.000	12.643/0.000
12	I think that the teachers are sufficient about the system in distance education.	862(29.80)	1021(35.30)	734(25.4)	274(9.50)	5.316/0.001	33.904/0.000
13	I think that the teachers fully adapt to distance education.	717(24.80)	1175(40.60)	715(24.70)	284(9.80)	2.013/0.110	27.964/0.000
14	I realized that hospital applications are unnecessary with distance education.	2517(87.10)	233(8.10)	95(3.30)	46(1.60)	15.016/0.000	11.083/0.000
15	Vocational training without Hospital Practices put me at ease	2396(82.90)	293(10.10)	138(4.80)	64(2.20)	0.985/0.399	3.330/0.019
16	I believe that I can gain professional competence without hospital applications.	2417(83.60)	323(11.20)	103(3.60)	48(1.70)	1.876/0.131	5.892/0.001
17	I learned to solve computer problems more easily with distance education.	1126(38.90)	920(31.80)	524(18.10)	321(11.10)	7.433/0.000	14.681/0.000
18	My self-sufficiency skills improved with distance education.	998(34.50)	1018(35.20)	633(21.90)	242(8.40)	4.643/0.003	23.206/0.000
19	With distance education, it became difficult for me to communicate with my friends.	727(25.10)	767(26.50)	748(25.90)	649(22.40)	16.960/0.000	32.333/0.000
20	With distance education, it became difficult for me to communicate with my teachers.	694(24.00)	847(29.30)	710(24.6)	640(22.10)	20.725/0.000	32.719/0.000
21	My time management skills improved with distance education.	1368(47.30)	873(30.20)	430(14.90)	220(7.60)	6.324/0.000	37.748/0.000

4. DISCUSSION

In our study, we aimed to evaluate the suitability of distance education, which we quickly put into practice, for use in the field of health sciences, instead of the formal education that should continue during the pandemic process, which was included in our lives as an extraordinary situation. Studies indicate that the creation of effective distance education programs actually requires a lot of resources and infrastructure. In this context, sufficient financial resources, personnel and academician support, expertise of the faculties, a good infrastructure and technological materials are needed [24]. However, in the process we live in, distance education has been started in the field of health, as in many other fields, without checking the adequacy of all this infrastructure and analyzing whether there is sufficient program content. When the stress experienced in this process was evaluated with different scales in our study, both depression, anxiety and stress levels and perceived stress levels in education did not differ significantly between departments. Accordingly, the educational evaluation was thought to be generalizable for all students in the field of health sciences.

While the effective use of different educational theories in teaching is mentioned in the literature, the necessity of using different teaching methods and theories together in order to ensure permanent and effective learning is also mentioned. While planning the online education to be given to the students, it is inevitable to create a program that will enable the students to acquire critical thinking skills, which will also improve their clinical decision-making skills. It is stated that while designing the prepared educational contents, course contents and clinical areas of use should be evaluated together, and practices such as assignments, question-answer methods, case analyzes should be included in which students can show their group and individual performances [25-27].

When our study findings are examined, it is seen that the majority of the students (41.40%) definitely do not want to continue the course with distance education and they state that it is much more difficult (58.20%) to learn with the current methods and the quality of the education they receive in this period has decreased (67.20%). Based on these data, it was concluded that online education should be restructured for undergraduate students. Based on these data, it can be said that the teaching of distance education programs used in all courses should be analyzed more broadly. In their study, Legg et al (2009) mentioned in detail the usability of the constructivist model in distance education and the additional arrangements that should be made [28]. These data support our study. While evaluating the data of another study, the positive aspects of distance education were evaluated; The thoughts that “it will be economical in acquiring information”, “information can be constantly updated”, “enable cooperation over the internet”, “enable continuous education after graduation in nursing” and “make it easier to maintain family life” predominate. The main conclusion emphasized in the same study is that nursing department students do not approve of distance education. Here are the ideas that students defend more; It can be summarized as that not all programs can be given in nursing, and that there will be deficiencies in laboratory and clinical practices, which have an important place in a practice-oriented profession [17]. Another study reported that web-based courses were not effective enough for design development, testing, and evaluation of results and applications [29]. The findings of these studies coincide with our study in which the main negativities of distance education are evaluated by the students.

In a study conducted with academics, it was emphasized that students should take more responsibility for learning in a web-based environment and that the online format forces students to think and participate more in courses with more theoretical content [30]. Considering our results, it can be stated that the thoughts of the academicians and the thoughts

of the students do not overlap in most areas. In our study, only 8.40% of students gained the ability to be self-sufficient in this process; It has been revealed that 5.10% find it easier to learn this method, 4.50% think that their interest in field courses has increased and they have gained a sense of responsibility. In other words, the general thoughts of the students are that they do not accept online education and do not find it suitable for learning. In the Johnson study, academics offered several recommendations for the development of successful curricula and content and for an effective transition to online teaching. Teamwork was also emphasized for the effectiveness of the trainings to be prepared in this direction, and the need for three experts to establish the team was mentioned. These; content specialist (academic), web-based pedagogy specialist and technology specialist [30]. In our results, 67.20% of the students stated that the quality of the education they received did not increase with distance education. For this, it can be said that working with a team and making a more detailed program, as suggested by Johnson, will yield good results.

Parallel to other studies, it was found that video and computer-based methods were used at a high level in the data of our study, especially in asynchronous mode. This situation will give the chance to learn more effectively as it provides the opportunity to access education in the form of “anytime, anywhere” flexibly [31]. In addition, it was worried that learning difficulties could be seen more in the students in this group, since following the courses related to distance education mostly over the phone would not be ergonomic and would make it difficult to focus for a long time. This study also reported that, consistent with the pedagogical literature in higher education, experiments with web-based formats such as asynchronous chat rooms among students and faculty will be effective in increasing students' participation in discussions, as well as increasing students' ability to synthesize and critically analyze material when these methods are used [32]. However, the fact that students did not use any communication other than listening to the online presentation or prefer chat rooms in our study may have formed the basis of negative thoughts and comments on this subject.

In our study, a direct relationship was found between screen time for education and scale scores. We thought that this situation was related to the increased levels of anxiety that the education they received would be insufficient. NESS scale total score with the answers given to the questions 'The course contents used with distance education are of sufficient quality', 'I think that the instructors are fully compatible with distance education', 'Vocational training without hospital practices relieved me', 'I believe that I can gain professional competence without hospital practices' no significant relationship was found between. There is a significant relationship between all other questions and scale scores. This result is important in terms of showing us that the answers given by the students to the questions and the scale scores are compatible. In the study of Taşocak et al., which contradicts our study, it was reported that nursing students viewed web-based education positively [16]. The data obtained in the studies include findings that web-based education, which will be prepared by determining national criteria in higher education and nursing education, will be much more effective, will facilitate learning, will even contribute to the acquisition of clinical skills, and cost-effective education can be provided to more students [33-35]. However, in our study findings, the students emphasized; one of the priority problems, which was also supported in the study by Boz and Kurubacak (2008), was not found a clear solution during the pandemic-related distance education process, which is currently being implemented, for how to gain practical training and skills, which are an indispensable element in basic health education [15].

The results of another study, looking at web-based education from a different dimension, were evaluated by the academic staff who teach distance education, simulation, tele-health and other information tools in nursing education and practice of a nursing faculty in a university. The

results show that although 66% of the educators have competence in all methods, 69% of them demand additional training [36]. It is thought that the transition to web-based education without considering the adequate infrastructure and the qualification levels of academicians in all higher education institutions in Turkey during the current pandemic process and our study data is a factor that increases the educational stress of students. Perceptions about care behaviors in online nursing education with the addition of an online program to the education of graduate students studying in nursing; has provided guidance on how educators can effectively communicate care to their students about the development of knowledge on this subject [37]. These data are not consistent with our findings. The reason for this is that the studies carried out include students in the semesters after basic skills such as master's degree are acquired; therefore, it may be that students in these groups are subject to distance education after they have already acquired the basic skills in face-to-face education and the basic issues related to the purpose of their education are clear in their minds.

5. CONCLUSION AND RECOMMENDATIONS

Based on our study findings, distance education, which we quickly put into practice, is suitable for use in the field of health sciences when it provides conditions such as adequate infrastructure, instructor support, and sufficient material support, instead of formal education, which should continue in the pandemic process, which has become an extraordinary situation in our lives; Since all these infrastructure services have not been adequately established in all higher education institutions in Turkey, it is seen that students cannot benefit from this education effectively enough in general. In order to ensure the effectiveness of education, necessary arrangements and infrastructure should be established rapidly in all health education institutions. With the provision of the appropriate infrastructure and the training of adequate trainers, a more effective education program can be created in the next education period that can be perceived as sufficient for the students.

Limitations of the Research

The limitations of the study are that this study was carried out only on students studying in the Department of Nursing, Midwifery and Physiotherapy in the Faculty of Health Sciences of a state university, and with students who use social networks and agree to participate in the research. In addition, the stress levels of the students participating in the study are limited to the scope of the "Nursing Education Stress Scale" and the short form of the "Depression Anxiety Stress Scale".

Thanks

We thank the students who agreed to participate in the study for their support.

Ethical Aspect of Research

In order to conduct the study, permission was obtained from the Süleyman Demirel University Faculty of Medicine Clinical Research Ethics Committee (May 11, 2020, number 72867572.050.01.04-57398).

Conflict of Interest

There is no conflict of interest between the authors.

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Ethics Aspect of the Study / Ethics Committee Approval:

Approval was obtained from Süleyman Demirel University Faculty of Medicine Clinical Research Ethics Committee (dated 11 May 2020 and numbered 72867572.0500.01.04-57398).

Author Contribution/Author Contributions:

Idea/Concept: SE; Design: SE, ŞÖK; Data Collection and/or Processing: MA, HA; Analysis and/or Interpretation: ŞÖK, SE; Literature Review: MA, HA, SE; Writing: SE, HA; Critical review: ŞÖK.

Conflict of Interest:

There is no conflict of interest among the authors regarding the research.

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