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Attitudes Towards E-Learning of Disabled Students Studying in Sports Sciences Undergraduate Programs During the Covid-19 Period

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Ethical Statement: It is declared that scientific and ethical principles have been followed while carrying out and writing this study and that all the sources used have been properly cited.

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Abstract

The purpose of this study is to examine the attitudes of disabled students studying in sports science undergraduate programs towards e-learning during the Covid-19 period. The study group of the research consists of 96 disabled students studying in sports science undergraduate programs of 24 state universities in the 2020-2021 academic year and participating in the study voluntarily. The data of the research were collected with the "Attitude Scale Towards E-Learning". According to research findings; While there was no significant difference in gender, age, class, disability type and department variables, has the e-learning system make your life easier? If there were no variable isolation days, would you want distance education under normal conditions? Significant differences were detected between the attitude scale towards e-learning and its sub-dimensions in the variable.

Keywords: Covid 19, disable student, distance learning, physical education and sports, attitude.

Covid-19 Döneminde Spor Bilimleri Lisans Programlarında Öğrenim Gören Engelli Öğrencilerin E-Öğrenmeye Yönelik Tutumları

Özet

Bu çalışmanın amacı, Covid-19 döneminde spor bilimleri lisans programlarında öğrenim gören engelli öğrencilerin e-öğrenmeye yönelik tutumlarının incelenmesidir. Araştırmanın çalışma grubunu 2020-2021 eğitim-öğretim yılında 24 devlet üniversitesinin spor bilimleri lisans programlarında öğrenim gören ve çalışmaya gönüllü olarak katılan 96 engelli öğrenci oluşturmaktadır. Araştırmanın verileri "E-Öğrenmeye Yönelik Tutum Ölçeği" ile toplanmıştır. Araştırma bulgularına göre; cinsiyet, yaş, sınıf, engel türü değişkenlerinde anlamlı farklılık rastlanmazken, bölüm, e-öğrenme sistemi hayatınızı kolaylaştırdı mı? değişkeni ile izolasyon günleri olmasaydı normal şartlarda uzaktan eğitim ister miydiniz? değişkeninde e-öğrenmeye yönelik tutum ölçeği ve alt boyutları arasında anlamlı farklılıklar tespit edilmiştir.

Anahtar Kelimeler: Covid 19, engelli öğrenci, uzaktan eğitim, beden eğitimi ve spor, tutum

INTRODUCTION

The Coronavirus pandemic, which emerged in Wuhan, China, in 2019, rapidly spread worldwide. This virus, also known as SARS-CoV-2, can start with mild cold-like symptoms but can lead to more severe respiratory illnesses. The World Health Organization declared this outbreak a pandemic on March 11, 2020. On the same date, the first coronavirus case was detected in our country. Due to the virus's rapid transmission characteristics, minimizing physical contact became necessary. Consequently, measures were taken in our country, and a transition from face-to-face education to remote learning was implemented. From March 23, 2020, all universities shifted to remote learning platforms. During this period, the demand for remote education also increased (6).

Due to the Coronavirus pandemic, the remote education system, which provides opportunities in electronic environments, offered students a contact-free learning environment (16). Additionally, remote education can directly or indirectly affect students' performance or mediate their performance (10). The Higher Education Council (YÖK) undertook work on regulations, infrastructure, human resources, content, and application areas during this process. In the spring semester of 2020, universities with the infrastructure for remote education were permitted to conduct comprehensive remote education applications. Along with the remote education system, e-learning, which involves the distribution of instructional content primarily through computers and their connected networks, gained importance. Within the scope of the Coronavirus pandemic, efforts were made to prevent students from falling behind in their courses through digitalization in education. However, it was identified that disabled students faced challenges with e-learning, and YÖK announced on May 7, 2020, that it had initiated a study on this issue (19). There are 51,647 disabled students in Turkish universities. Among them, 68% are male, 32% are female, and 89% are enrolled in open education programs. Of these students, 8,735 have visual impairments, 3,760 have hearing impairments, and 14,955 have physical disabilities. A total of 23,581 are undergraduate students (18).

In this context, the Higher Education General Council held a meeting on February 8, 2018, and implemented a series of decisions regarding the admission of students to departments with special talent exams. According to these decisions: For hearing-impaired students, course contents should be provided in text format and, if possible, with subtitles; for students who can lip-read, the instructor's face should be visible on the screen during presentations. For visually impaired students, rich text formats should be used, graphics and visuals should be described with large fonts and contrasting colors, and care should be taken to explain graphics in online exams. Additionally, extra time should be provided as a general measure based on the type of disability. These measures were communicated to universities to ensure that disabled students could follow the remote education process more effectively. A 10% quota was allocated for these students, and for programs with fewer than ten quotas, an additional quota of one person was created for disabled students. Candidates who passed the talent exam but could not be placed in the disabled students quota were designated as reserves. If the number of applicants for the relevant program exceeded the allocated quota, the evaluation of candidates who passed the exam but could not be placed was conducted by including their ÖSYS score. If the quotas for disabled students were not filled, they were transferred to the quotas allocated for other students (18).

The literature review indicates that numerous studies related to remote education processes in universities during the Covid-19 period have been conducted (4, 5, 14). However, no specific studies investigating the attitudes of disabled students enrolled in undergraduate sports science programs towards e-learning have been found. Therefore, this study aims to contribute to the relevant literature and provide insights for stakeholders in the field. The purpose of this study is to examine the attitudes of disabled students enrolled in undergraduate sports science programs towards e-learning during the Covid-19 period and to determine whether their attitudes differ based on demographic variables. In line with this objective, the following questions were addressed:

What are the attitudes of disabled students enrolled in undergraduate sports science programs towards e-learning during the Covid-19 period?

Do the attitudes of disabled students enrolled in undergraduate sports science programs towards e-learning during the Covid-19 period significantly differ based on demographic variables?

METHOD

Research Model

This study, designed in a descriptive survey model, examines the attitudes of disabled students enrolled in undergraduate sports science programs towards e-learning during the Covid-19 pandemic.

Sample and Population of The Study

The research population consists of disabled students enrolled in sports science undergraduate programs at 24 state universities during the academic year 2022-2023 in Türkiye. Because the population size was not attained, the research sample group consists of 96 students who were reached using the convenience sampling approach and freely participated in the study. Table 1 shows the distribution of the sample group's demographic characteristics.

Table 1. Demographic characteristics of the students participating in the study

Variable	Category	n	%
Gender	Female	21	21,9
	Male	75	78,1
	Total	96	100
Age	21 years and under	19	19,8
	22-26 years	50	52,1
	27-31 years	11	11,5
	32 years and over	16	16,7
	Total	96	100
The program of currently studying	Physical Education and Sports Teaching	17	17,7
	Coaching Education	42	43,8
	Sports Management	37	38,5
	Total	96	100
Class	First year	25	26,0
	Second year	17	17,7
	Third year	24	25,0
	Fourth year	30	31,3
	Total	96	100
Has the e-learning system made your life easier?	Yes	63	65,6
	No	33	34,4
	Total	96	100
Would you prefer distance learning under normal conditions if there were no days of isolation?	Yes	32	33,3
	No	64	66,7
	Total	96	100
What is your disability type?	Physical	46	47,9
	Auditory	8	8,3
	Blind	42	43,8
	Total	96	100

In Table 3, it is determined that 78.1% of the students participating in the study are male, and 21.9% are female. It is observed that 52.1% of the students are between the ages of 22-26, 19.8% are 21 years old or younger, 16.7% are 32 years old or older, and 11.5% are in the age range of 27-31. Additionally, 43.8% of the students are enrolled in the Coaching Education program, 38.5% in the Sports Management program, and 17.7% in the Physical Education and Sports Teaching program. Regarding academic standing, 31.3% are in their fourth year, 26.0% in their first year, 25.0% in their third year, and 17.7% in their second year. When asked, “Has the e-learning made your life easier?” 65.6% of the students responded "yes," and 34.4% responded "no." In response to the question, “Would you prefer distance learning under normal conditions if there were no days of isolation?” 66.7% of the students answered "no," and 33.7% answered "yes." Furthermore, 47.9% of the students have physical disabilities, 43.8% have blind, and 8.3% have auditory disabilities.

Tools of Data Collection

The data for the research were collected using a "Personal Information Form" created by the researcher and the "Attitude Towards E-Learning" scale. The personal information form contains seven questions regarding the participants' gender, age, program, class, whether they would prefer distance education under normal circumstances without the isolation days, whether the e-learning system has made their lives easier, and the type of disability. The "Attitude Towards E-Learning" scale, developed by Kisanga (11) and adapted into Turkish by Biçer and Korucu (2) with validity and reliability studies, consists of four sub-dimensions (tendency to use technology, satisfaction, motivation, and usefulness) and a total of 23 items. The scale items are rated on a 4-point Likert type scale as "1- Strongly Disagree, 2- Disagree, 3- Agree, 4- Strongly Agree." Negative items are reverse-coded.

During the scale adaptation process, researchers determined that the 23-item scale had a KMO value of 0.847, a Bartlett test value of x^2=8821.036; df=253 (p= 0.000), and explained 44.947% of the total variance as a result of the exploratory factor analysis. The confirmatory factor analysis revealed that the goodness of fit indices for the scale were at excellent and acceptable levels [(x^2(df=253, N=1721) = 8821.036, p<0.000, RMSEA= 0.061, RMR= 0.049, S-RMR= 0.042, GFI= 0.95, AGFI= 0.93, CFI= 0.93, NFI= 0.98, and IFI= 0.98)]. The internal consistency coefficients for the sub-dimensions of the scale were calculated to be between 0.69 and 0.76, and 0.79 for the entire scale (2). In the present study, the internal consistency coefficients for the sub-dimensions of the scale were found to be 0.71 for the tendency to use technology, 0.78 for satisfaction, 0.83 for motivation, and 0.76 for usability, with an overall scale consistency of 0.81.

Due to the Covid-19 pandemic, the data for this research were collected online via a Google Docs form. The link to the online survey was distributed to participants through their academic advisors, as well as via email and WhatsApp. Prior to answering the questions, participants were required to provide consent by ticking a declaration box on the survey form. For visually impaired participants, the survey questions were administered via telephone through their advisors, and their responses were recorded online.

Statistical Analysis

The data were analyzed using the SPSS-26 software package. Initially, the skewness and kurtosis values were examined to determine whether the data were normally distributed (Table 2). The analysis revealed that the skewness and kurtosis values of the data obtained from the study ranged between -1 and +1, indicating a normal distribution. Huck (8) stated that for data to exhibit a normal distribution, the skewness and kurtosis values should be between -1 and +1. Within this framework, in addition to descriptive statistical techniques, an independent samples t-test was used to determine differences between two groups concerning demographic variables, and a one-way analysis of variance (ANOVA) was used to determine differences among more than two groups. The Post Hoc Tukey test was employed to measure significance between groups. A significance level of p<0.05 was accepted for evaluating differences between groups

Table 2. Skewness and kurtosis values

Scale		Skewness	Kurtosis
Attitude Scale Towards E-Learning	**n**	**Value**	**Value**
Tendency To Use the Technology Sub-Dimension	96	-,142	,016
Satisfaction Sub-Dimension	96	,038	,197
Motivation Sub-Dimension	96	,287	-,107
Usefulness Sub-Dimension	96	-,059	,266

Ethical approval and institutional permission

Ethical approval for the study was obtained from the Non-Interventional Clinical Research Ethics Committee of Mardin Artuklu University with the decision numbered 2023/15-27 dated 12.01.2023.

FINDINGS

This section includes descriptive statistics for the e-learning attitude scale in Table 3, analysis results according to the gender variable in Table 4, analysis results according to the age variable in Table 5, analysis results according to the program variable in Table 6, analysis results according to the class variable in Table 7, analysis results according to the variable "Has the e-learning system make your life easier?" in Table 8, analysis results according to the variable " Would you prefer distance learning under normal conditions if there were no days of isolation?" in Table 9, and analysis results according to the variable "Type of disability" in Table 10.

Table 3. Descriptive statistics results regarding the attitude scale towards e-learning

Scale	n	M	SD
Tendency To Use the Technology Sub-Dimension	96	2,12	0,52
Satisfaction Sub-Dimension	96	2,66	0,64
Motivation Sub-Dimension	96	2,45	0,61
Usefulness Sub-Dimension	96	2,41	0,59

According to Table 3, the mean scores of disabled students regarding their attitudes towards e-learning are as follows: for the tendency to use technology sub-dimension (M=2.12, SD=0.52), for the sub-dimension of satisfaction (M=2.66, SD=0.64), for the sub-dimension of motivation (M=2.45, SD=0.61), and for the sub-dimension of usefulness (M=2.41, SD=0.59). When examining the means according to the scale score ranges, it is observed that students' attitudes towards e-learning are positive in the sub-dimensions of tendency to use technology, satisfaction, and usefulness, while their attitudes towards e-learning in the motivation sub-dimension are negative.

Table 4. Analysis results by gender variable

Scale	Gender	n	X	Ss	p
Tendency To Use the Technology Sub-Dimension	Male	75	2,13	0,53	0,692
	Female	21	2,08	0,49	
Satisfaction Sub-Dimension	Male	75	2,65	0,63	0,678
	Female	21	2,71	0,70	
Motivation Sub-Dimension	Male	75	2,46	0,61	0,983
	Female	21	2,45	0,66	
Usefulness Sub-Dimension	Male	75	2,41	0,61	0,997
	Female	21	2,41	0,54	

According to the results of the independent samples t test performed according to Table 4, no statistical significance was observed in the gender variable related to the attitude scale towards e-learning ($p>0.05$).

Table 5. Analysis results by age variable

Scale	Age	n	X	Ss	p
Tendency To Use the Technology Sub-Dimension	21 years and under	19	2,17	0,56	0,404
	22-26 years	50	2,15	0,51	
	27-31 years	11	2,20	0,38	
	32 years and over	16	1,92	0,60	
	Total	96	2,12	0,52	
Satisfaction Sub-Dimension	21 years and under	19	2,57	0,60	0,426
	22-26 years	50	2,60	0,70	
	27-31 years	11	2,84	0,44	
	32 years and over	16	2,84	0,59	
	Total	96	2,66	0,64	
Motivation Sub-Dimension	21 years and under	19	2,37	0,58	0,233
	22-26 years	50	2,38	0,60	
	27-31 years	11	2,62	0,63	
	32 years and over	16	2,69	0,67	
	Total	96	2,45	0,61	
Usefulness Sub-Dimension	21 years and under	19	2,54	0,67	0,760
	22-26 years	50	2,39	0,59	
	27-31 years	11	2,35	0,60	
	32 years and over	16	2,38	0,53	
	Total	96	2,41	0,59	

According to the results of one-way analysis of variance according to Table 5, no statistically significant difference was detected according to the age variable (p>0.05).

Table 6. Analysis results by program variable

Attitude Scale Towards E-Learning	Program	n	X	Ss	p	Tukey
Tendency To Use the Technology Sub-Dimension	A- Coaching Education	42	2,11	0,53	0,586	
	B- Sports Management	37	2,08	0,53		
	C- Physical Education and Sports Teaching	17	2,24	0,51		
	Total	96	2,12	0,52		
Satisfaction Sub-Dimension	A- Coaching Education	42	2,71	0,67	0,007*	A>C/B>C
	B- Sports Management	37	2,81	0,60		
	C- Physical Education and Sports Teaching	17	2,24	0,46		
	Total	96	2,66	0,64		
Motivation Sub-Dimension	A- Coaching Education	42	2,57	0,64	0,016*	A>C/B>C
	B- Sports Management	37	2,5	0,57		
	C- Physical Education and Sports Teaching	17	2,08	0,51		
	Total	96	2,45	0,61		
Usefulness Sub-Dimension	A- Coaching Education	42	2,42	0,61	0,986	
	B- Sports Management	37	2,41	0,59		
	C- Physical Education and Sports Teaching	17	2,39	0,61		
	Total	96	2,41	0,59		

According to Table 6, when examining the results of the one-way analysis of variance conducted for the program variable in the study, there were no significant differences in the "tendency to use the technology" and "usefulness" sub-dimensions of the attitude scale towards e-learning, while statistically significant differences were found in the "satisfaction" sub-dimension and the "motivation" sub-dimension. According to these results, in the Post Hoc test conducted to measure the significance between the groups, the table states that the scores of students in the coaching education program are higher than those in the physical education

and sport education program in the satisfaction sub-dimension and the motivation sub-dimension, and that the scores of the sport management program are higher than those in the physical education and sport education program. ($p<0.05$).

Table 7. Analysis results by class variable

Scale	Class	n	X	Ss	p
Tendency To Use the Technology Sub-Dimension	First year	25	2,06	0,62	
	Second year	17	2,19	0,46	
	Third year	24	2,24	0,48	0,483
	Fourth year	30	2,04	0,51	
	Total	96	2,12	0,52	
Satisfaction Sub-Dimension	First year	25	2,86	0,72	
	Second year	17	2,66	0,44	
	Third year	24	2,51	0,63	0,293
	Fourth year	30	2,63	0,67	
	Total	96	2,66	0,64	
Motivation Sub-Dimension	First year	25	2,70	0,72	
	Second year	17	2,39	0,61	
	Third year	24	2,40	0,58	0,134
	Fourth year	30	2,33	0,51	
	Total	96	2,45	0,61	
Usefulness Sub-Dimension	First year	25	2,17	0,70	
	Second year	17	2,57	0,60	
	Third year	24	2,53	0,55	0,097
	Fourth year	30	2,43	0,48	
	Total	96	2,41	0,59	

According to Table 7, according to the results of one-way analysis of variance performed on the class variable, no statistically significant difference was found ($p>0.05$).

Table 8. Has the E-Learning system made your life easier? analysis results by variable

Has the E-Learning System Made Your Life Easier?		n	X	Ss	p
Tendency To Use the Technology Sub-Dimension	Yes	1,96	0,46	0,46	0,000*
	No	2,43	0,50	0,50	
Satisfaction Sub-Dimension	Yes	2,77	0,64	0,64	0,021*
	No	2,45	0,60	0,60	
Motivation Sub-Dimension	Yes	2,62	0,62	0,62	0,000*
	No	2,14	0,47	0,47	
Usefulness Sub-Dimension	Yes	2,24	0,55	0,55	0,000*
	No	2,74	0,54	0,54	

In Table 8, when examining the results of the independent samples t-test for the variable "Has the e-learning system made your life easier?", statistically significant differences were found in all four sub-dimensions of the attitude scale towards e-learning (tendency to use the technology, satisfaction, motivation, and usefulness). The t-test scores reveal that students who answered "no" had higher scores in the sub-dimensions of the tendency to use the technology and usefulness compared to those who answered "yes" Conversely, students who answered "yes" had higher scores in the sub-dimensions of satisfaction and motivation compared to those who answered "no" ($p<0.05$).

Table 9. Would you prefer distance learning under normal conditions if there were no days of isolation? analysis results by variable

Would you prefer distance learning under normal conditions if there were no days of isolation?		n	X	Ss	p
Tendency To Use the Technology Sub-Dimension	Yes	32	1,9	0,50	0,003*
	No	64	2,23	0,50	
Satisfaction Sub-Dimension	Yes	32	2,9	0,77	0,023*
	No	64	2,54	0,54	
Motivation Sub-Dimension	Yes	32	2,82	0,61	0,000*
	No	64	2,27	0,54	
Usefulness Sub-Dimension	Yes	32	1,98	0,57	0,000*
	No	64	2,63	0,48	

In Table 9, when examining the results of the t-test for independent samples for the variable "Would you prefer distance learning under normal conditions if there were no days of isolation?", statistically significant differences were found in all four sub-dimensions of the attitude scale towards e-learning (tendency to use the technology, satisfaction, motivation and usefulness). The results of the t-test indicate that students who answered "no" had higher values in the sub-dimensions of tendency to use the technology and usefulness than those who answered "yes" in the sub-dimensions of satisfaction and motivation, on the other hand, students who answered "yes" had higher values than those who answered "no" ($p<0.05$).

Table 10. Analysis results by disability type variable

Scale	Disability Type	n	X	Ss	p
Tendency To Use the Technology Sub-Dimension	Physical	46	2,04	0,49	0,327
	Auditory	8	2,27	0,69	
	Blind	42	2,18	0,53	
	Total	96	2,12	0,52	
Satisfaction Sub-Dimension	Physical	46	2,66	0,71	0,863
	Auditory	8	2,55	0,32	
	Blind	42	2,69	0,62	
	Total	96	2,66	0,64	
Motivation Sub-Dimension	Physical	46	2,54	0,59	0,38
	Auditory	8	2,48	0,41	
	Blind	42	2,36	0,67	
	Total	96	2,45	0,61	
Usefulness Sub-Dimension	Physical	46	2,41	0,58	0,993
	Auditory	8	2,44	0,59	
	Blind	42	2,41	0,62	
	Total	96	2,41	0,59	

According to Table 10, no statistically significant difference was observed according to the results of one-way analysis of variance performed according to the disability type variable ($p>0.05$).

DISCUSSION AND CONCLUSION

In this study, which investigates the attitudes of disabled students enrolled in undergraduate sports science programs towards e-learning during the Covid-19 period, it was found that their attitudes were positive in terms of technology usage tendency, satisfaction, and usability, but negative in terms of motivation. A review of the literature reveals that studies conducted during and after the Covid-19 period predominantly focused on samples of sports science undergraduate students without disabled students (1, 3, 9, 12, 15), and no studies examining the attitudes of sports science undergraduates with disabled students towards e-learning

were found. In this context, the findings of the current study are discussed in light of the findings from studies on the attitudes, opinions, styles, etc., of sports science undergraduate students towards e-learning.

A review of the literature indicates that the studies by Özdemir and Aydoğan (12) and Söyler and Altıngül (15) found that university students studying sports education generally had positive attitudes towards e-learning. These findings are in parallel with the results of our study.

Another conclusion reached in this study is that students' attitudes towards e-learning significantly differed according to the variables of the program they are enrolled in, whether the e-learning system made their lives easier, and whether they would prefer distance education under normal circumstances if there were no isolation days. However, there were no significant differences based on the variables of gender, age, class, and type of disability. While there were no significant differences in the sub-dimensions of technology usage tendency and usability in students' attitudes towards e-learning according to the program variable, significant differences were found in the sub-dimensions of satisfaction and motivation. In the sub-dimensions of satisfaction and motivation, the attitude scores of students in coaching education and sports management programs were higher compared to those in physical education and sports teaching programs.

Different results have been obtained in the literature. Özdemir and Aydoğan (12) found that the attitudes of university students studying sports education towards e-learning did not significantly differ according to gender and class variables. Özdemir and Erdoğan (12), in their study on sports science students, observed significant differences in the program variable between the teaching and management programs. These results align with our study findings concerning the variables of gender, class, and program. However, Doğar (3) observed that the attitudes of sports science students towards e-learning did not differ according to the program variable. The emergence of different results regarding the program variable is thought to be due to the differing aims and visions of the programs within the field. In the study conducted by Geri (7) on students of the school of physical education and sports, a significant difference was found in the program variable. Additionally, Akgül et al. (1) found in their study, which examined the e-learning attitude levels of sports science faculty students, that students' attitudes towards e-learning differed according to the gender variable but did not differ according to age, program, and class variables. Similarly, Söyler and Altıngül (15) found that the attitudes of sports science students towards e-learning differed according to gender and program variables but did not differ according to age and class variables. In line with these findings, Türker (17) observed that female students' average e-learning attitude scores were higher than those of male students, and significant differences were found in the sub-dimensions of technology usage and usability according to the class variable.

In general, when examining studies that investigate university students' attitudes towards e-learning, different results have also been observed. Rafiq et al. (13) found in their study on higher education students that male student had more positive attitudes towards e-learning compared to female students. The results from these studies align with our findings only in terms of the program variable but do not align in other aspects. The fact that the sample group of the current study specifically consists of disabled students, as well as the use of different data collection tools in the studies, is thought to have led to different results. In the study, students' opinions significantly differed in all sub-dimensions for the questions "Has the e-learning system made your life easier?" and "Would you prefer distance learning under normal conditions if there were no days of isolation?" It is believed that the distance education system during the COVID-19 period benefited disabled students, but their inclination towards face-to-face education under normal circumstances was stronger. Additionally, the attitudes of disabled students towards e-learning did not significantly differ according to the type of disability variable. No studies were found in the literature that investigated the e-learning attitudes of disabled students in light of these variables. It can be said that all students had similar attitudes, regardless of the type of disability.

In conclusion, the attitudes of disabled students towards e-learning do not vary according to gender, age, class, or disability type variables, and the program "Has the e-learning system made your life easier?" and "Would you prefer distance learning under normal conditions if there were no days of isolation?" vary significantly depending on the variables. This research, which examines the attitudes of undergraduate sports science disabled students towards e-learning during the COVID-19 period, contributes to the literature but also has some limitations. First, this study is limited to disabled students studying at 24 state universities. The

study could be replicated with a larger sample group. Second, the findings of the study were compared with findings from studies conducted on samples of students without disabled students. The study findings could be generalized to similar studies. Third, a quantitative research approach was used in this study. Studies using qualitative research approaches could be conducted to obtain more in-depth results.

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