Clinical and Experimental Health Sciences

21st-Century Skills and Lateral Thinking Dispositions of Nursing Students: An Example Global Pandemic

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ABSTRACT

Objective: The aim of this study was to determine the 21st-century skills and lateral thinking dispositions of nursing students during the pandemic process. Speed of technological changes accesses the highest level in the current century. Following the technology and usability rate is going down among the world population. The ability of new technology usage created a new social class in society. This differentiation positively or negatively affects the social and economic status of modern human thinking ability, creativity, and life quality. Especially after the COVID-19 pandemic, the ability of current technology usage made a big difference among people to access information and education.

Methods: This cross-sectional study is descriptive and relational. The research was conducted with 409 students studying at the Faculty of Nursing of a state university in Istanbul, Turkey.

Individual Characteristics Questionnaire, Multidimensional 21st Century Skills Scale, and Lateral Thinking Disposition Scale were used to obtain research data. The data obtained were analysed by number, descriptive statistics, Kolmogorov-Smirnov, Kruskal-Wallis and Mann-Whitney U tests.

Results: The results showed that nursing students were able to improve lateral thinking during pandemic. The male students have a significantly higher advantage of using technology compared with female students ($p<0.05$). We must emphasise that the economy of students also affects their lateral thinking ability ($p<0.05$).

Conclusion: In this century, many changes and transformations are taking place in health care systems in parallel with technological developments. It is necessary that we must educate nurses who can contribute to the changes and transformations and adapt to innovations. To educate new generation innovative nurses we must adapt our education programs together with the academic staff. It is necessary that must educate nurses who can contribute to the changes and transformations and adapt to innovations. To educate new generation innovative nurses we must adapt our education programs together with the academic staff.

Keywords: COVID-19, students, nursing, thinking, problem solving.

1. INTRODUCTION

The COVID – 19 outbreak caused a devastating change in the world. A new type of coronavirus (SARS-CoV-2) began to appear in Wuhan, China, in late December of 2019 and affected the entire world with high transmission efficiency (1). The World Health Organization (WHO) declared that the COVID-19 outbreak to be an international public health emergency and characterized a global pandemic (2). To prevent the spread of COVID-19, the social routine was quickly changed. Closed social environments where people gather, such as shopping centres, theatres, etc., and primarily face-to-face education, are suspended in many countries. The governments decided to switch to online distance learning in the education system, to manage this process and the crisis (3).

These dramatic changes in the education system due to the COVID-19 pandemic create big adaptation and technological problems, such as the orientation of students to the online education system, as well as the lack of technological gadgets and technology use difficulties. The current young generation (generation Z), which is famous for as over knowledge and rapid ability to use the latest technology, can adapt to digital environments faster. Although all these benefits of the new young generation seem a positive evolution, the gap among different groups that can access or lack technology in society increased at the international level. Moreover, it is undeniable that these changes have a significant impact on technology, social structure, and education. Currently, developing

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technology causes differences in individuals' skills, and using these skills by individuals is extremely important for keeping up with the century. It is believed that individuals who cannot adapt to the current changes will have a lower success rate in education and business life (4-6).

Adaptation of current changes is only can be possible to improve critical thinking, learning and innovation etc. A society that wants to get power in the world should raise the number of people in the population that has these abilities (7, 8). It is known that the development of these skills is directly related to the thinking and evaluation processes of individuals. To develop the creativity of students with critical thinking skills, it is aimed to educate creative and problem-solving individuals with multiple perspectives by including innovation education in the curriculum (9, 10). Innovation has continued since the beginning of nursing education to improve the contemporary thinking skills of nurses. The American Nurses Association also emphasises that contemporary education techniques that support innovative thinking, critical thinking, problem-solving and research skills should be included in nursing education (11). It is known that creative thinking and 21st-century skills are one of important milestone in expanding innovation in nursing discipline. Currently, the concept of lateral thinking is frequently encountered, and it is thought to be among the 21st-century requirements, where the importance of creative thinking has increased (12). Lateral thinking is expressed as a method of problem-solving using imagination rather than traditional thinking or logic. It requires the use of information in an encouraging and intriguing way to ensure cognitive structuring. It is also known that individuals with a tendency to think laterally are productive; they explore and search for the possibilities, use inductive reasoning, are creative and can use the knowledge (13). As a result of the global changes and transformations, nursing students are expected to have higher-level skills. Innovative thinking should be prioritised in nursing education, and students' efforts in this direction should be supported throughout the education. Therefore, it is believed that more emphasis should be placed on lateral thinking dispositions and 21st-century skills. The transition to online education, especially due to the global pandemic, has led to differences in nursing education which is a practical field. No studies have been found in the literature on how these differences are met by students. Determining the 21st-century skills and lateral thinking dispositions created by the changing and transforming world on nursing students during the pandemic is very important in planning the education to be given to students. In line with these data, determining nursing students' views on online education, their 21st-century skills and lateral thinking dispositions will contribute to our decision on timely and effective practices and improve the outcomes of education. This study aims at contributing to the literature and being a guide in nursing education.

The aim of this study was to determine the 21st-century skills and lateral thinking dispositions of nursing students during the pandemic process.

2. METHODOLOGY

2.1. Design

This research is a cross-sectional study. The research was conducted online with students of the Faculty of Nursing of a state university in Istanbul, Turkey.

The research was conducted at the Faculty of Nursing of a state university in Istanbul between November and December 2020, with 424 nursing students studying in the national program in the fall semester of the 2020-2021 academic year. This study it was aimed to reach the entire universe without sample selection. The study was completed with 409 nursing students who agreed to participate and completed the questionnaire entirely, and the rate of return was determined as 96.4%. The students who continue their education in the nursing department of the university where the research was conducted and individuals who are not over 25 years old and volunteer to participate in the research were included in the research.

2.2. Data collection tools

The data of this study were obtained using Individual Characteristics Questionnaire, Multidimensional 21st Century Skills Scale, and Lateral Thinking Disposition Scale. Individual Characteristics Questionnaire prepared by the researchers in line with the literature consists of 8 questions containing information such as age, gender, income level, and parental education level (14-17).

2.2.1. Multidimensional 21st-century skills scale

Multidimensional 21st Century Skills Scale was developed by Cevik and Senturk (2019). The scale is used to determine the 21st-century skills of individuals between the ages of 15 and 25. The scale has five subscales: Information and technology literacy skills, critical thinking and problem-solving skills, entrepreneurship and innovation skills, social responsibility and leadership skills, and career awareness. It is a five-point Likert scale consisting of 41 items rated as "strongly agree", "agree", "neutral", "disagree", and "strongly disagree". The scale score was between 41 and 205, and the mean value was 123. The information and technology literacy skills subscale score was the lowest, 15, the highest 75, and the mean value was 45. In the critical thinking and problem-solving skills subscale, the lowest score was 6, the highest score was 30, and the mean value was 18. In the entrepreneurship and innovation skills subscale, the score ranged between 10 and 50, and the mean value was 30. The lowest score in the social responsibility and leadership skills subscale was 4, the highest score was 20, and the mean score was 12. In the career awareness subscale, the lowest score was 6, the highest score was 30, and the mean value was 18. 21st-century skills levels of individuals increased along with the score value. Items numbered 16, 17, 18, 19, 20, 21, 35 are reverse coded. The Cronbach's Alpha coefficient of the scale

is 0.86 (9). The Cronbach's Alpha coefficient of the scale in this study was 0.91.

2.2.2. Lateral thinking disposition scale

The lateral Thinking Disposition Scale was developed by Semerci (2016). The scale is one-dimensional and consists of nine items. It is a five-point Likert scale rated as "strongly disagree" (1), "mainly disagree" (2), "partially agree" (3), "mainly agree" (4), and "strongly agree" (5). The lateral thinking dispositions increased along with the score levels. The minimum score of the scale was 5, the maximum score was 45 and the mean value was 25. The Cronbach's Alpha coefficient of the scale is 0.75 (13). The Cronbach's Alpha coefficient of the scale in this study was 0.90.

2.3. Data collection

The data were obtained by sending a link to the questionnaire created by the researchers via Google Forms. In the first part of the prepared questionnaire, a volunteer consent form containing the purpose and scope of the study was included. In the second part of the questionnaire, questions related to individual characteristics, Multidimensional 21st Century Skills Scale, and Lateral Thinking Dispositions Scale were included. The responses of the individuals who answered the survey questions by approving the volunteer consent form were evaluated. The time spent answering the survey questions was approximately 5-10 minutes.

2.4. Statistical Analysis

Statistical Package for the Social Sciences (SPSS 22.0 for Windows, SPSS Inc., Chicago, IL) program was used for the analysis of the research data. In the analysis of the data, the Kolmogorov-Smirnov test was used to evaluate the conformity of the relevant variables to normal distribution to determine the statistical method to be used. Analysis of the descriptive data included number, percentage, median, minimum, maximum, mean, and standard deviation. The difference between three and more groups that did not show normal distribution was evaluated using the Kruskal-Wallis test, and the difference between the two groups was analysed using the Mann-Whitney U test. For the difference between three and more groups, Mann-Whitney U was used as a post hoc test. Spearman correlation coefficient was used to show the relationship between the two variables. In statistical evaluation, significance was accepted as $p < 0.05$.

2.5. Ethical Considerations

Written permission was obtained from the Scientific Research Ethics Committee of the university where the study was conducted (Date: 2020 / Decision No: 23/1) and from the related institution. All students invited to the study were informed about the research, and their consent were taken. Necessary permissions for the use of the scales were obtained.

Limitations of Study

This study has several limitations. Since this study is a single-centered study and limited to the faculty in which the study was conducted, it cannot be generalized to all nursing students. It is also limited to the answers given to the scales used in the study.

3. RESULTS

The mean age of the nursing students participating in the study was 21.10 ± 1.48 years and 82.5% of them were women. It was determined that 90.2% of the students did not work at any job, and 71.6% of the students had equal income and expenses. Due to the global epidemic, nursing education is carried out remotely in an online environment, and it was found that most of the students (76%) have the necessary technological equipment to participate in online education but have difficulty in accessing the internet at different rates (Table 1).

Table 1. *Distribution of the participants' individual characteristics and views on online education*

Characteristics	N=409	
	n	%
Gender		
Female	341	82.5
Male	68	17.5
Year of University		
First Year	83	20.3
Second Year	104	25.4
Third Year	106	25.9
Final Year	116	28.4
Education Level of the Mother		
Illiterate	36	8.8
Elementary	212	51.8
Secondary	46	11.2
High school	82	20.0
University and higher education	33	8.2
Education Level of the Father		
Illiterate	5	1.2
Elementary	153	37.4
Secondary	72	17.6
High school	123	30.1
University and higher education	56	13.7
Income Level		
Income lower than the expenses	77	18,8
Equal income and expenses	293	71,6
Income higher than the expenses	39	9,6
Difficulty in Using Technology		
Yes	26	6.3
No	224	54.8
Occasionally	159	38.9
Difficulty in Internet Access		
Yes	42	10.3
No	165	40.3
Occasionally	202	49.4
Availability of the Device Required for Online Education	311	76.0
Yes	98	24.0
No		

Students' Multidimensional 21st-century Scale total score ranged between 91 and 205, and the mean score was found to be 163.63 ± 16.64. The total score of Lateral Thinking Disposition Scale ranged between 15 and 45. and the mean score was determined as 34.61 ± 5.30 (Table 2).

Table 2. *Distribution of Multidimensional 21st Century Skills Scale and subscale scores and Lateral Thinking Disposition Scale scores*

Multidimensional 21st Century Skills Scale Subscales	M	SD.	Min	Max
Information and Technology Literacy Skills	62.67	7.33	29	75
Critical Thinking and Problem-Solving Skills	22.46	6.22	6	30
Entrepreneurship and Innovation Skills	37.31	6.44	14	50
Social Responsibility and Leadership Skills	14.72	2.37	7	20
Career Awareness	26.47	3.23	10	30
Multidimensional 21st Century Skills Scale (Total)	163.63	16.64	91	205
Lateral Thinking Disposition Scale (Total)	34.61	5.30	15	45

Statistically significant differences were found between Multidimensional 21st-century Scale subscales of information and technology literacy skills, critical thinking and problem-solving skills, entrepreneurship and innovation skills, social responsibility and leadership skills, and career awareness according to the participants' difficulties in using technology ($p<0.01$). There is a statistically significant difference between "Critical thinking and problem-solving skills" subscale mean scores of the students according to the year of university variable ($p<0.01$). It was determined that the mean value (25.04) of the participants in the first year of university was significantly higher than the mean values (22.54 – 21.57 – 21.36) of the participants in the other years. A statistically significant difference was found between "social responsibility and leadership skills" mean scores according to the year of university variable ($p<0.05$). It was established that the mean value of the participants in the second year of university (14.32) was significantly lower than the mean value of the participants (15.02) in the third year (Table 3).

There is a statistically significant difference between Lateral Thinking Disposition Scale total scores according to the income variable ($p<0.05$). It was determined that the mean value of the participants whose income was less than their expenses (33.35) was significantly lower than the mean value of the participants whose income was equal or higher than their expenses (34.82 – 35.51). A statistically significant difference was found between "entrepreneurship and innovation skills" subscale mean scores according to the gender variable ($p<0.05$). It was observed that the mean value of male participants (38.32) was significantly higher than the mean value of female participants (37.11). For lateral thinking disposition scale total scores, the mean value of male participants (36.01) was found to be significantly higher than the mean value of female participants (34.33) (Table 3).

According to the results of the correlation test among the scales used in the study, there was a moderate positive and statistically significant correlation between the total scores of the Lateral Thinking Disposition Scale and the Multidimensional 21st-century Skills Scale ($p<0.001$; $r=0.631$). It was observed that there was a moderate positive, significant correlation between Lateral Thinking Disposition Scale total scores and "information and technology literacy skills, critical thinking and problem-solving skills, entrepreneurship and innovation skills, social responsibility and leadership skills, and career awareness." subscale scores (Table 4).

Table 4. *Examination of the relationship between Multidimensional 21st Century Skills Scale and Lateral Thinking Disposition Scale*

Multidimensional 21st Century Skills Scale Subscales		Lateral Thinking Disposition Scale (Total)
Information and Technology Literacy Skills	r_s	**.589****
	p	**<0.001**
Critical Thinking and Problem-Solving Skills	r_s	-.060
	p	.228
Entrepreneurship and Innovation Skills	r_s	**.613****
	p	**<0.001**
Social Responsibility and Leadership Skills	r_s	**.464****
	p	**<0.001**
Career Awareness	r_s	**.466****
	p	**<0.001**
Multidimensional 21st Century Skills Scale (Total)	r_s	**.631****
	p	**<0.001**

*rs = Spearman Correlation Coefficient, **p<0.01*

Table 3. *Comparison of individual characteristics and Multidimensional 21st Century Skills Scale and Lateral Thinking Disposition Scale*

	Multidimensional 21st Century Skills Scale (Total)	Information and Technology Literacy Skills Subscale	Critical Thinking and Problem-Solving Skills Subscale	**Entrepreneurship and Innovation Skills Subscale**	**Social Responsibility and Leadership Skills Subscale**	**Career Awareness Subscale**	**Lateral Thinking Disposition Scale (Total)**
	M± SD (min-max) Median Range	**M± SD (min-max) Median Range**	**M± SD (min-max) Median Range**	**M± SD (min-max) Median Range**	**M± SD (min-max)Median Range**	**M± SD (min-max) Median Range**	**M± SD (min-max) Median Range**
Gender							
Female	163.88±15.54 (121-205) 163 84	62.74± 6.83 (48-75) 61 27	22.72±5.99 (6-30) 24 24	37.11± 6.28 (14-50) 37 36	14.72±2.38 (7-20) 15 13	26.60±2.98 (15-30) 27 15	34.33±5.14 (18-45) 34 27
Male	162.34±21.42 (91-205) 160 114	62.29 ± 9.51 (29-75) 62.5 46	21.13±7.18 (6-30) 22 24	38.32± 7.19 (17-50) 40 33	14.74± 2.35 (9-20) 14 11	25.85±4.24 (10-30) 26.5 20	36.01±5.88 (15-45) 36 30
Z	-0.094	-0.613	-1.528	**-2.155**	-0.188	-0.928	**2.679**
p	0.925	0.54	0.127	**0.031***	0.851	0.354	**0.007***
Year of University							
First Year	164.82±15.13 (128-195) 165 67	61.69±6.76 (41-75) 62 34	25.04±3.35 (14-30) 26 16	35.78±6.31 (21-49) 35 28	14.98±2.54 (7-20) 15 13	27.34±2.42 (21-30) 28 9	34.69±4.78 (24-45) 34 21
Second Year	162.55±18.05 (121-205) 158.5 84	62.38±7.08 (48-75) 60.5 27	22.54±6.19 (6-30) 24 24	37.08±7.17 (14-50) 37.5 36	14.32±2.59 (8-20) 14 12	26.24±3.30 (15-30) 26 15	34.07±5.75 (18-45) 33.5 27
Third Year	162.48±17.71 (91-201) 163 110	62.19±8.13 (29-75) 60.5 46	21.57±6.56 (6-30) 24 24	37.71±6.39 (17-50) 38 33	15.02±1.92 (9-20) 15 11	26.00±4.05 (10-30) 26 20	34.29±5.18 (15-45) 34 30
Final Year	164.78±15.39 (133-205) 164 72	64.06±7.08 (48-75) 62 27	21.36±6.99 (6-30) 24 24	38.08±5.73 (27-50) 39 23	14.62±2.39 (7-20) 14 13	26.50±2.71 (18-50) 27 12	35.34±5.34 (23-45) 35 22
X^2	2.493	5.357	14.648	5.805	9.891	6.738	3.719
p	0.477	0.147	**0.002***	0.122	**0.020***	0.081	0.293
Difference	-	-	1-2, 1-3, 1-4	-	2-3	-	-
Income Lower Than the Expenses	159.45±19.33 (91-201) 159 110	61.08±8.69 (29-75) 60 46	21.69±6.12 (6-30) 23 24	36.55±7.13 (17-50) 37 33	14.55±2.51 (7-20) 14 13	25.60±4.67 (10-30) 26 20	33.35±5.54 (15-45) 33 30
Equal Income and Expenses	164.58±16.01 (128-205) 14 77	63.04±7.06 (41-75) 61 34	22.65±6.15 (6-30) 24 24	37.46±6.28 (14-50) 38 36	14.75±2.35 (7-20) 15 13	26.67±2.81 (18-30) 27 12	34.82±5.36 (18-45) 35 27
Income higher Than the expenses	164.67±14.63 (125-193) 162 68	62.95±6.11 (51-75) 62 24	22.54±6.97 (6-30) 24 24	37.67±6.33 (25-50) 36 25	14.79±2.33 (9-20) 14 11	26.72±2.41 (22-30) 27 8	35.51±3.86 (28-45) 35 17
X^2	3.292	3.337	3.241	1.244	0.573	1.281	7.145
p	0.193	0.189	0.198	0.537	0.751	0.527	**0.028***
Difference	-	-	-	-	-	-	1-2 2-3
Difficulty in Using Technology							
Yes	161.92±15.46 (133-194) 162 61	62.73±7.34 (48-75) 61.5 27	19.19±7.62 (6-30) 21.5 24	39.73±4.94 (31-50) 39.5 19	14.54±1.56 (12-17) 14 5	25.73±3.33 (18-30) 24 12	34.15±4.89 (24-44) 36 20
No	166.63±17.63 (91-205) 165 114	63.83±7.63 (29-75) 62 46	23.13±5.88 (6-30) 24 24	37.82±6.41 (17-50) 38 33	14.97±2.59 (7-20) 15 13	26.88±3.26 (10-30) 28 20	35.46±5.36 (15-45) 35 30
Occasionally	159.67±14.48 (117-205) 158 88	61.01±6.59 (41-75) 60 34	22.05±6.27 (6-30) 24 24	36.19±6.54 (14-50) 36 36	14.39±2.13 (7-20) 14 13	26.03±3.11 (11-30) 26 19	33.48±5.09 (18-45) 34 27
X^2	**17.22**	**15.326**	**8.162**	**11.089**	**7.668**	**11.124**	**15.698**
p	**0.001***	**0.001***	**0.017***	**0.004***	**0.022***	**0.004***	**0.001***
Difference	2-1, 2-3	2-3	1-2, 1-3	1-3, 2-3	2-3	2-1, 2-3	2-3

4. DISCUSSION

During the COVID-19 pandemic which has reached serious levels worldwide, face-to-face training was suspended, online education was initiated, and the requirements of the digital age gained more importance. During the global pandemic, theoretical and practical courses continued online with video support in nursing education. In this study, it was determined that the 21st-century skills total and subscale mean scores were recorded high. Similarly, Turner et al. (2016) found that nursing students' 21st-century perception overall mean scores were high (18). When the literature was examined, it was found that 21st-century skills were also at a high level in studies conducted with university students studying in different fields (19-22). The findings which were obtained from our study was supported by the previous research. It is known that today's young people, known as the digital generation or generation z, differ from previous generations because they were born and grew up in a digital age. This difference has a positive impact on 21st-century skills.

Lateral thinking, which addresses creative thinking, has become a necessity in the field of nursing in recent years (11). In this study, nursing students' lateral thinking skills mean scores were found as higher level. Although previous studies were conducted on university student education in different fields, our study unique research on lateral thinking skills of nursing studies in the literature. And as we were found in our study, previous researchers also found that lateral thinking dispositions were high (14-16, 23). The results of previous study also support that nursing students, like other university students, have high lateral thinking dispositions.

It is known that the usage of technology is a part of 21st-century skills (17). In this study, it was determined that the "Multidimensional 21st-century Skills Scale" and the "Lateral Thinking Disposition Scale" mean scores of the students who do not have difficulty in using technology during the global pandemic process were detected significantly higher. It was established that 21st-century skills scores and lateral thinking dispositions increased along with digital competence. This indicates that students who experienced difficulties in the usage of technology should be supported to prevent problems in the educational process.

It is stated that the critical thinking and problem-solving skills of nursing students need to be developed, and critical thinking is extremely important in nursing science and nursing interventions (14). In this study, the mean scores of the "Critical thinking and problem-solving skills" subscale of the "Multidimensional 21st Century Skills Scale" were found to be significantly higher in first-year students. A study conducted by Pehlivan (2005) with students of the Faculty of Education, levels of communication competence subscale of 21st-century skills were evaluated, and it was concluded that the mean scores of the first-year students were significantly higher than the final-year students (24). The reason for the higher level of critical thinking and problem-solving skills and communication competence of first-year students is due to the differences experienced in the education system with the changing and developing technology. Besides, in this study, it was found that the lateral thinking disposition mean scores of the nursing students according to the year of university were similar. In other studies, it was noted that the lateral thinking disposition mean scores of university students according to their class levels were similar compared with each other (15, 23, 25-27). This indicates that there is no difference between university students in terms of lateral thinking dispositions.

Meetings-trainings such as courses, congresses, and seminars that individuals attend have a financial dimension. Therefore, the financial status is a tool for individuals to develop a few competencies. In our study, no significant difference was found between the Multidimensional 21st-century Skills Scale subscales and the total scores according to the income level variable. Zeybek (2019) stated in their studies that the mean scores of students with high family income obtained from different subscales of 21st-century skills were significantly higher than those with low income (22). On the other hand, a significant relationship was found between the family income level of the students participating in our study and their lateral thinking dispositions. When the income levels of the participants and their lateral thinking dispositions were evaluated, it was determined that the mean value of the participants whose income was less than their expenses was significantly lower than the mean value of the participants whose income was equal to or higher than their expenses. Students may need financial support resources to develop their lateral thinking dispositions.

The gender of the individuals affects their feelings and behaviours, and this creates differences in entrepreneurship characteristics (28). In our study, it was established that the Multidimensional 21st-century Skills Scale "entrepreneurship and innovation skills" subscale mean scores of male students were significantly higher than female students. In the study conducted by Ozden et al. (2018), in which 21st-century skills of teacher candidates were determined, it was noted that there was no significant difference between gender and 21st-century skills (20). When the literature was examined, it was also concluded in similar studies that there was no significant difference between 21st-century skills according to gender variable (19, 21). In addition, when the Lateral Thinking Disposition Scale mean scores were evaluated, it was determined that the mean scores of male students were significantly higher than female students. In the studies conducted by Lawrence & Xavier (2013) and Semerci (2017), it was indicated that the lateral thinking disposition mean scores of male individuals were high (15, 29). It is believed that male individuals may be more interested in lateral thinking because lateral thinking skills deal with innovative thinking, and there are technical areas in innovative processes. Meanwhile, it seems that the entrepreneurship characteristic of the male gender has a positive effect.

It is obvious that lateral thinking skills and 21st-century skills of nursing students will contribute to nursing interventions and health care systems. In this study, a moderate positive, significant correlation was found between the Lateral Thinking

Disposition Scale total scores and the Multidimensional 21st-century Skills Scale total score, and information and technology literacy skills, entrepreneurship and innovation skills, social responsibility and leadership skills and career Awareness subscale scores. It is observed that a high level of lateral thinking disposition of nursing students has a positive effect on 21st-century skills. In this respective, it is extremely important to support 21st-century skills and lateral thinking dispositions of students during their educational process.

5. CONCLUSION

In our study, 21st-century skills and lateral thinking dispositions of nursing students were found to be high. Students have the skills to easily adapt to the online education process that is mandatory due to the global pandemic. In this century, many changes and transformations are taking place in health care systems in parallel with the technological developments. Therefore, it is necessary to train nurses who can contribute to the changes and transformations and adapt to innovations. Accordingly, it is recommended that the education programs for the faculty members be improved, and the nursing curriculum includes training aimed at developing 21st-century skills and lateral thinking dispositions of the students.

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