

The Effect of COVID-19 Pandemic on Nursing Students' Quality of Life and Motivation Levels: A Qualitative Study

COVID-19 Pandemisinin Hemşirelik Öğrencilerinin Yaşam Kalitesi ve Motivasyon Düzeylerine Etkisi: Nitel Bir Çalışma

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ABSTRACT Objective: The purpose of the study was to reveal the effect of the coronavirus disease-2019 (COVID-19) pandemic on the quality of life and motivation levels of nursing students. **Material and Methods:** The population of this qualitative study consisted of nursing students in a health science faculty in Turkey. The number of participants was determined according to the data saturation, and the study was completed with 24 nursing students. The data were collected by the researchers using an online semi-structured interview form developed in line with the purpose of the research. **Results:** Nursing students defined COVID-19 disease as “dangerous”. The most significant positive effect of COVID-19 to humanity was reported as “giving more importance to hygiene”, while the most important negative effect was found as “economic weakening”. The most important factors that affected students' motivation and quality of life were expressed as “fear” and “uncertainty”. **Conclusion:** The study showed that most of the students had negative thoughts during the COVID-19 pandemic. They evaluated the period positively by trying to develop personally and professionally to promote their quality of life and motivation. As a result, the pandemic is thought to be traumatic for individuals. Adaptation and improvements may be possible by minimizing isolation time, providing improved training and support, informing the public with reliable sources, and identifying needs.

ÖZET Amaç: Bu çalışma, koronavirüs hastalığı-2019 [coronavirus disease-2019 (COVID-19)] pandemisinin, hemşirelik bölümünde öğrenim gören öğrencilerin yaşam kalitesi ve motivasyon düzeylerine olan etkisini incelemek amacıyla yapılmıştır. **Gereç ve Yöntemler:** Nitel araştırma yöntemi kullanılan çalışmanın evrenini, Türkiye’de bir sağlık bilimleri fakültesinde öğrenim gören hemşirelik bölümü öğrencileri oluşturdu. Katılımcı sayısı, veri doygunluğuna göre belirlendi ve araştırma toplam 24 hemşirelik öğrencisi ile sonlandırıldı. Veriler, araştırmacı tarafından çalışmanın amacına uygun olarak geliştirilen yarı yapılandırılmış görüşme formu ile toplandı. **Bulgular:** Hemşirelik öğrencileri, COVID-19 hastalığını “tehlikeli” olarak ifade etmişlerdir. COVID-19’un insanlığa en önemli olumlu etkisi “hijyene verilen önemin artması” olarak belirtilirken “ekonomik zayıflama” en önemli olumsuz etki olarak belirlendi. Korku ve belirsizlik, öğrencilerin motivasyon ve yaşam kalitesini etkileyen en önemli başlıklar olarak belirlendi. **Sonuç:** Öğrencilerin büyük çoğunluğunun COVID-19 pandemi sürecinde olumsuz düşüncelere sahip olduğu belirlendi. Bu süreçte öğrencilerin yaşam kalitelerini ve motivasyonlarını yükseltmek için kişisel ve mesleki anlamda gelişmeye çalışarak süreci olumlu yönde değerlendirdikleri saptandı. Sonuç olarak pandemi sürecinin bireyler için travmatik olduğu düşünülmektedir. Öğrencilerin uyum sağlayabilmesi, bireylerin güvenilir kaynaklarla bilgilendirilmesi, izolasyonun en aza indirilmesi, kaliteli bir eğitim sağlanması ve ihtiyaçların belirlenmesi ile mümkün olabilir.

Keywords: COVID-19; motivation; nursing students; quality of life

Anahtar Kelimeler: COVID-19; motivasyon; hemşirelik öğrencileri; yaşam kalitesi

Coronavirus disease-2019 (COVID-19) is an acute respiratory disease caused by the virus first named “novel coronavirus 2019-nCoV”, and then “severe acute respiratory syndrome-coronavirus-2 (SARS-CoV-2)”. It started with an unidentified respiratory disease in Wuhan province of China at the

end of December 2019. The disease rapidly spread to other parts of China and countries throughout the world. It was declared a pandemic by the World Health Organization (WHO) on January 30, 2020.^{1,2}

As there is not yet a specific vaccine or cure for this infectious disease, it causes anxiety in humans

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and is perceived as a threat due to fear and an unknown reason. Besides, social distance, isolation, and quarantine practices to prevent contagiousness reduce people's options and physically limit individuals. In various studies, negative psychological effects like psychological problems, depression, stress, depressed mood, nervousness, insomnia post-traumatic stress disorder, frustration, and emotional exhaustion have been reported in individuals after the quarantine process.³⁻⁹ A systematic review reported the causes of stress in quarantine as long quarantine period, fear of infection, disappointment, boredom, insufficient material, insufficient information, financial loss, and stigmatization.¹⁰

This study was conducted to determine the effect of the COVID-19 pandemic on nursing students' quality of life and motivation levels, how the COVID-19 pandemic has affected the quality of life and motivation levels of students studying in the nursing department, and the factors that contribute or decrease these variables.

MATERIAL AND METHODS

DESIGN OF THE STUDY

This study is in the qualitative research design model. In the qualitative research model, detailed data on the subject can be collected using observation, interview, document, etc. to explain the concepts, facts, and relationships that are analyzed.¹¹

In the study, a descriptive phenomenology design was used. In the descriptive phenomenology design, there is a conscious tendency towards the researched phenomenon through perceptions, thoughts, memories, and emotions related to the experience, and the researcher reveals the perceptions and experiences of the participants as they are.^{12,13}

In this study, interview method which provides in-depth information about a research topic or a question according to Büyüköztürk et al. was employed.¹⁴ With this research, it is aimed to gain a more detailed and in-depth perspective on the existing situation.

STUDY GROUP

The research was carried out with the participation of 24 nursing students in different grades at the Depart-

ment of Nursing, Faculty of Health Sciences, Gümüşhane University. Within the scope of the research, at least 5 students from each grade were tried to be included in the study to obtain effective data related to COVID-19 disease and their lifestyle changes.

Depending on the purpose of the study, in the selection of the study group, the maximum diversity sampling type, a purposeful sampling method, was used to conduct in-depth research.¹⁵ This type of sample selection seems reasonable to discover the underlying meaning of the data and associated formations and provide insight. According to Creswell, maximum diversity sampling involves determining some criteria that distinguish different participants and regions and presenting participants or regions that are quite different from the defined criteria.¹⁶ Thus, this approach documents comprehensive diversity and identifies significant common links. This approach is appropriate when the main purpose of the research is to present different perspectives of the participants.

The study group involves 24 students; 8, 6, 5, 5 students were in the first, second, third, and fourth grades, respectively.

DATA COLLECTION TOOLS

Data collection tools of the study were a participant information form including socio-demographic data of the participants (age, gender, and class) and a semi-structured interview form. Semi-structured interviews allow us to obtain in-depth information in the relevant field.¹⁴ To develop the semi-structured interview form, firstly, a literature review was conducted on COVID-19 disease, its effects on human life were investigated and 5 questions including COVID-19 effects, daily life activities, motivation, and quality of life were determined. To provide comprehensibility for the participants, the interview form was revised and then finalized.

In line with the purpose of the study, the research questions were established as follows;

1. What do you think about COVID-19 disease? What does it remind you of ?
2. What do you think has changed/will change due to COVID-19 disease in the world?

3. How has COVID-19 disease changed your life? What has changed in your daily life?

4. How do you think COVID-19 disease has affected your motivation and quality of life?

5. What are you doing to increase your motivation and quality of life during the pandemic?

DATA COLLECTION

Before the data collection process, online interviews were made with the participants, they were informed about the purpose of the research, and written and verbal consent was obtained. The data were collected through a semi-structured interview form. The interview form was implemented through e-mail, as formal education in schools was suspended, and online education started due to the COVID-19 pandemics. According to Yıldırım and Şimşek, e-mail is among the various methods and tools that can be used for qualitative research.¹⁷ Prior to the data collection, a pilot study was conducted with one of the participants, who was then excluded from the study. No repeated interviews were conducted with the participants. Twelve people invited to participate in the study did not accept to take part in the study.

While determining the study group, maximum diversity sampling type, one of the purposeful sampling methods, was utilized to conduct in-depth research depending on the purpose of the study. The maximum diversity sampling includes determining some criteria that distinguish different participants and regions and presenting these participants or regions based on the determined criteria.¹⁸

Therefore, it was aimed to reach 8 students from each class, but interviews were held with 6 people from some classes voluntarily. The interviews were conducted via e-mail, and the researchers received confirmation from the participants for the unclear items. Interview transcripts were read by the researchers, and an expert on qualitative interviews was consulted for data saturation.

ETHICAL CONSIDERATIONS

Ethical approval was obtained from the Non-interventional Clinical Research Ethics Committee of Gümüşhane University Scientific Research and Pub-

lication (date: 19.05.2019, no: 2020/05). To carry out the study, permission was obtained from the Turkish Republic Ministry of Health (2020-05-05T12_01_11.). Electronic informed consent was obtained from each participant before the investigation. The participant could withdraw from the survey at any moment without providing any justification. The research was conducted in line with the Declaration of Helsinki. The names of the participants were kept confidential, and they were coded as interviewees (S1, S2, S3...).

DATA ANALYSIS

Socio-demographic data of the participants were evaluated using the statistical software SPSS 22.0 package program and presented as a number, percentage, mean, and standard deviation. For the analysis of semi-structured questions, descriptive analysis was applied. According to Yıldırım and Şimşek, the data obtained in the descriptive analysis are first described systematically and clearly.¹⁹ Then, descriptions are explained and interpreted, cause and effect relationships are analyzed, and conclusions are drawn. Accordingly, in the analysis of the data collected from the interviews, firstly, the codes based on the raw data were obtained, and then the themes linked to the codes were obtained. Creswell noted that themes explain the findings in a study.¹⁶ They are the indication of the codes as they consist of codes. Several codes form a theme, and themes form different categories of information that do not overlap. The themes generated in the research are classified into general categories. According to Merriam, categories are conceptual elements that cover many original examples or pieces of previously defined data and are linked to each other.²⁰

In the data analysis, the names of the individuals were kept confidential, and each interviewee was coded to facilitate the analysis (for example, S1 for Student 1, S2 for Student 2). Before the analysis, the data were carefully re-read. The descriptive analysis method was used in the analysis of the data. Before the analysis of the data obtained in the interviews, a general conceptual structure was created, general categories or themes were predetermined, and more detailed codes that could be gathered under these

themes were included in the list. Finally, the themes were arranged and interpreted in a way that the reader could understand.

VALIDITY AND RELIABILITY

It was taken into account that the findings were consistent and meaningful within themselves, and the findings were a meaningful whole. The researcher has defined the methods and stages of the research in a clear and detailed manner. More than one researcher coded the data, and these codes were compared.

The analyzes were evaluated by 2 experts who were trained and experienced on the subject, and who were also consulted during the preparation of the open-ended questions. The data collection tools to be used in this research, the raw data of the research, the coding to be made during the analysis phase, and all other materials will be stored for confirmability.

RESULTS

This section involves themes and categories in line with the data obtained in the research. The categories of each theme are shown in tables, and the codes stated by the participants commonly are supported by the expressions of the students. Fifteen of the students were female, and 9 were male. The mean age was 20.54 ± 1.38 years (minimum: 18, maximum: 23), and 11 and 13 of the students were aged 18-20 and 21-23, respectively.

As seen in [Table 1](#), 4 themes were identified regarding the category of nursing students' perceptions of COVID-19 disease. The study showed that the cognitive structures in nursing students' minds were found at the highest levels about the themes of "characteristics of COVID-19" and "the situation experienced by the individual infected COVID-19". In the themes of "characteristics of COVID-19", the concepts of dangerous, deadly, and rapidly spreading concepts were expressed most by the students. Res-

TABLE 1: The category of nursing students' COVID-19 disease perceptions.

Theme	Code	Participant	F
Characteristics of COVID-19 disease	Dangerous	S2, S4, S6, S18, S20, S21, S24	7
	Deadly	S3, S18, S19, S24	4
	Earth-shattering	S8, S23	2
	Worrying	S13, S24, S6	3
	Spreading rapidly	S11, S17, S20	3
	Transmissible from animals	S12, S16	2
	Turning point	S2	1
The situation experienced by the individual infected COVID-19	Respiratory distress	S11, S14, S18, S24	4
	Panic	S14	1
	Fear	S14, S15	2
	Quarantine	S6, S14, S15	3
	Isolation	S3, S14, S15	3
Causes of COVID-19 disease	Not paying attention to hygiene	S10	1
	Unconsciousness	S4	1
	Negligence	S4	1
	Harming nature	S6	1
Outcomes of COVID-19 disease	Death	S6	2
	Despair	S1, S15	1
	Hospital stay	S6	1
	Losing loved ones	S7	1
	Sacrifice	S19	1
	Living hell	S1	1

piratory distress, isolation, quarantine concepts are included in the theme of “the situation experienced by the individual infected COVID-19”. When we examine the theme of “outcomes of COVID-19 disease”, the concept of death stands out.

Below are some examples of sentences containing alternative concepts stated by nursing students.

“COVID-19 is a disease that affects the whole world and spreads rapidly. It is a deadly virus if not diagnosed early” (S3).

Table 2 contains the category of nursing students’ views about the effects of COVID-19 disease in the world. The themes that stand out in the COVID-19 disease perception category of nursing students are divided into 2 as positive effects and negative effects. In the theme of positive effects, expressions such as giving more importance to hand hygiene, giving more importance to health workers, understanding the value of being healthy are at the top of the list. Among the negative effects, the expressions of “economic weakening”, “a decrease in social activities”, “restriction”, and “a decrease in population” expressions were commonly stated.

Below are some examples of sentences containing alternative concepts stated by nursing students.

“I can say that the importance given to hygiene increased with the spread of the COVID-19 epidemic” (S1).

Themes in the category of nursing students’ views about the effect of COVID-19 disease on daily life activities are given in Table 3. The main topics in this category are maintaining a safe environment, communication, work, and entertainment.

Below are some examples of sentences containing alternative concepts stated by nursing students;

“I don’t go out unless I have to, I am isolated at home to avoid getting infected to COVID-19” (S1).

Table 4 contains the category of nursing students’ views about the effect of COVID-19 disease on their motivation levels. The effects of COVID-19 disease on the nursing students’ motivation levels were grouped under 2 themes as positive and negative effects.

Below are some examples of sentences containing alternative concepts stated by nursing students.

“With the transition to distance education, I am staying at home, I am spending more on my own, and in this sense, it contributed to me” (S7).

TABLE 2: Category of nursing students’ views about the effects of COVID-19 disease in the world.

Theme	Code	Participant	F
Positive effects	Giving more importance to hand hygiene	S1, S10, S11, S20, S21	6
	Increasing sense of unity	S3, S20	2
	Giving more importance to health workers	S7, S21, S24	3
	Increasing communication within the family	S13	1
	Strengthening the spiritual aspects	S2	1
	Increasing sensitivity to communicable diseases	S20	1
	Shifting to domestic production in some products in Turkey	S15	1
	Decreasing environmental pollution	S16, S19	2
	Understanding the value of being healthy	S15, S20, S21	3
	Deterioration of power balance among countries	S5	1
Negative effects	Economic weakening	S1, S2, S9, S11, S14, S22, S24	7
	A decrease in social activities	S1, S6, S11, S12, S18, S24	6
	A decrease in population	S1, S4, S24	3
	Being restricted	S17, S18, S24	3
	The collapse of the health system	S7, S13	2
	Increasing unemployment	S9, S12	2
	Negatively affected mental health	S16	1

TABLE 3: The category of nursing students' views about the effect of COVID-19 disease on daily life activities.

Theme	Code	Participant	F
Communication	Increasing use of the internet	S8, S16, S22, S1, S13	5
	Getting away from the community	S1, S4, S22	3
	Longing for loved ones	S3, S5, S22	3
Sleep	Anxiety-related insomnia	S7	1
	Gaining sleep habits	S24	1
Work and entertainment	Restricted leisure activities	S9, S15, S7, S24	4
	Increased preparation time for the civil service exam	S24	1
	Getting away from school and distance education	S1, S5, S7, S8, S9	5
	Feeling sad because of not being able to see friends and the lecturers at school	S5, S6	2
Movement	Doing sports at home	S24	1
	Reduced movement due to isolation	S7, S18	2
	Helping family members in housework	S24	1
Eating and drinking	Having regular and balanced diet	S14	1
	Consuming immune-strengthening foods	S14	1
	Abundant fluid intake	S14	1
Maintaining a safe environment	Isolation	S1, S2, S4, S8, S9, S10, S18, S20, S22, S23, S24	12
Personal cleaning and clothing	Paying more attention to hygiene	S15, S24	2
	Increasing self-care activities	S18	1
Death	Experiencing fear of death	S20	1
	Thinking that the world will end	S20	1

TABLE 4: The category of nursing students' views about the effect of COVID-19 disease on their motivation levels.

Theme	Code	Participant	F
Positive effects	Taking time for yourself	S7, S14, S24	3
	Increasing communication in the family	S14, S24	2
	Getting motivated for the exam	S22	1
	Preventing the transmission of disease to others	S8, S24	2
Negative effects	Anxiety/depression	S6, S17, S21	3
	Fear (lack of treatment, stigma, death)	S2, S3, S9, S10, S11, S14, S16, S17, S21	9
	Decreased will to live	S16	1
	Longing for loved ones	S21	1

In Table 5, the category of nursing students' views about the effect of COVID-19 disease on the quality of life is given. The students' views were gathered under two themes as positive effects and negative effects. Examples of sentences containing alternative concepts from sentences specified by nursing students are given below;

“COVID 19 has affected my quality of life very badly, sitting at home and living inactively has made me lead a monotonous life.” (S9).

Table 6 includes the category of activities that nursing students do to increase their motivation levels and quality of life during the pandemic. It was observed that the activities to be done to increase motivation levels and quality of life were centered around work and entertainment, and communication themes.

Examples of sentences containing alternative concepts from sentences specified by nursing students are given below;

TABLE 5: The category of nursing students' views about the effect of COVID 19 disease on quality of life.

Theme	Code	Participant	F
Positive effects	Having a balanced and regular diet	S18	1
	Gaining sleep habits	S18	1
	Paying more attention to health	S14, S18, S24	3
Negative effects	Feeling of uncertainty	S1, S3, S6, S7, S9, S10, S12, S20, S21, S22	10
	Psychological distress	S9, S15, S17, S23	4
	Not enjoying life	S9, S23	2

TABLE 6: The category of activities that nursing students do to increase their motivation levels and quality of life during the pandemic.

Theme	Code	Participant	F
Communication	An increase in the family communication and spending quality time with family members	S1, S4, S10, S17	4
	An increase in the internal communication of the individual	S7, S12, S21	3
	An increase in communication with their loved ones by phone	S3	1
Working and entertainment	Reading books	S1, S2, S5, S7, S9, S10, S11, S15, S17, S20, S21, S22, S23, S24	13
	Listening to music	S4, S22, S23, S24	4
	Watching movies/TV	S1, S2, S4, S6, S9, S14, S16, S21, S22, S24	10
	Using social media	S3	1
Eating and drinking	Having a regular and balanced diet	S13	1
	Strengthening immunity	S13	1
	Abundant fluid intake	S13	1
Sleep	Sleeping regularly	S13	1
Movement	Doing sports	S7, S17, S18, S19	4
	Do meditation	S19, S24	2
Maintaining a safe environment	Being isolated at home	S18, S24	2
	Obeying social distance rules outside	S18	1
Personal hygiene and clothing	Paying attention to personal hygiene	S18, S22	2
	Increasing hygiene at home	S18, S22	2
Death	Not thinking about death	S19, S24	2
	Being hopeful for the future	S19, S24	2

“Because I live at home due to the disease, I spend more time with my family and chat a lot.” (S1).

DISCUSSION

This study was conducted to identify the effects of quarantine during the COVID-19 pandemics on the quality of life and motivation of university students and to determine the factors that contribute to or decrease these variables. In this context, the data defined using descriptive analysis techniques were grouped under 6 different categories. These categories are *the category*

of COVID-19 disease perception, students' views on the effects of COVID-19 disease in the world, the category of views about the effect of COVID-19 disease on daily life activities, the category of views about the effect of COVID-19 disease on motivation levels, the category of views about the effect of COVID-19 disease on the quality of life and the category of activities that nursing students do to increase their motivation levels and quality of life during the pandemic.

The examination of the categories showed that in the theme of “the characteristics of COVID-19 dis-

ease”, the disease was described as “dangerous”, “worrying”, and “deadly”. In a study conducted during the SARS epidemic, participants defined the disease as “worrying”.²¹ Cao et al. stated that 24.9% of university students felt anxious about the COVID-19 pandemics.²² Knowing that an invisible virus causes disease and death can lead to unreal fears and panic in students. Considering the historical development of epidemics in the world and today, this fear is thought to be due to the absence of treatment for the disease, the lack of adequate healthcare services due to the high number of patients, and the high mortality rate of the disease.

The students expressed that the patients underwent “respiratory distress”, “isolation” and “quarantine” in “the situation experienced by the individual infected COVID-19 theme”. According to the WHO data, the most common symptoms of COVID-19, which have more symptoms than a cold, are fever and respiratory distress.² These results can be expected in line with television, the internet, and scientists providing information about the disease and the lessons students learn about infectious diseases in their educational processes.

In our study, very few participants reported death because of COVID-19 disease. Wang et al. found that participants were worried about family members infected with COVID-19, but they believed that they would survive when infected.²³ These results are thought to arise from the fact that most of the participants in the studies are young individuals, and they know that risk factors for COVID-19 are advanced age having a chronic disease.

In our study, the students reported that the importance given to hygiene in the world increased due to COVID-19 disease. Morrison et al. emphasized in their study that some participants thought that hygiene measures could be more harmful and/or unnecessary, while most participants expressed their willingness to fulfill hygiene behaviors.²⁴ In the study of Elrggal et al., most of the participants emphasized that maintaining adequate hand hygiene is very important in preventing Middle East respiratory syndrome (MERS).²⁵ Besides, Brug noted that if proper hand hygiene is not practiced, the risk of morbidity and mortality associated with MERS may increase.²⁶

These results are consistent with the studies in the literature suggesting that health behaviors increase as the risk perception increases.²⁷ Besides, the negative effects of COVID-19 in the world were expressed as an economic weakening and a decrease in social activity. According to relevant studies, the biggest problems of quarantine are psychological problems and economic losses.^{21,27,28}

In our study, the codes of “increasing use of the internet”, “isolation”, and “getting away from school and distance education” were highlighted in the theme of “the effect of COVID-19 disease on daily life activities”. Not staying in crowded places, staying at home, and obeying interpersonal distances are some of the strategies implemented by the Center for Disease Control and Prevention to control COVID-19 infection.^{7,29} Cava et al. examined the individuals’ quarantine experiences in the SARS outbreak, and the participants stated that they felt fear for the health of themselves and their relatives and that they experienced interruptions in daily life.³⁰ It is thought that the students restricted their daily life activities due to the high risk of contagiousness of the disease for fear of getting sick or infecting others. Students have increased the use of the internet to meet their relatives and learn about the disease. The literature has citations about that internet use increased during the epidemics.^{24,31-33} In this period, in which the internet usage of individuals has increased, even more, the training programs by the Ministry of Health, scientists, and health professionals about infection control can be effective in raising awareness about diseases.

The codes of “taking time for yourself” and “preventing the transmission of disease to others” were identified as important factors that increased students’ motivation. During the SARS epidemic, the motivation of elderly Chinese people was to protect the health of others.³³ It is expected and acceptable that COVID-19 disease harms students’ motivation, and they are scared. Ho et al. found that uninfected healthcare workers’ fear of infection was higher than infected healthcare workers.³⁴ In our study, the students experienced fear due to stigma, lack of treatment/adverse effects, and uncertainty due to COVID-19 disease. Maunder et al. reported that healthcare workers had conflicts between parenthood

and healthcare provider roles and experienced fear, anxiety, anger, and frustration. The sense of self-sacrifice and professional responsibility and the fear of exposing their families to infection have been reported to negatively affect the motivation of health workers.⁹

“Feeling uncertainty” and “psychological distress” were identified as factors that negatively affect quality of life. In studies conducted during an epidemic period, it was stated that healthcare professionals experienced insomnia, fatigue, and uncertainty.³⁵ Due to the pandemics, interruption of education and uncertainty in the academic process can negatively affect the mental health of students.

CONCLUSION

According to our results, most of the students had negative thoughts (fear, anxiety) due to the COVID-19 pandemic. In this period, they made positive evaluations by trying to develop personal and professional development to increase the quality of life and motivation of the students. In line with these results, it is recommended to ensure;

- Remote infrastructure transformation renewal of universities for pandemic changes theoretical courses,

- Psychological support research to cope with the stress and anxiety experienced by students for the pandemic,

- Creation and some other applications for students with restrictions, determining their expectations from web-based education.

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Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: Sevda Uzun, Nurşen Kulakaç; **Design:** Sevda Uzun, Nurşen Kulakaç; **Control/Supervision:** Sevda Uzun, Nurşen Kulakaç, Betül Mumcu; **Data Collection and/or Processing:** Sevda Uzun, Nurşen Kulakaç, Betül Mumcu; **Analysis and/or Interpretation:** Nurşen Kulakaç, Sevda Uzun; **Literature Review:** Sevda Uzun, Nurşen Kulakaç, Betül Mumcu; **Writing the Article:** Sevda Uzun, Nurşen Kulakaç, Betül Mumcu; **Critical Review:** Sevda Uzun, Nurşen Kulakaç, Betül Mumcu; **References and Fundings:** Sevda Uzun, Nurşen Kulakaç, Betül Mumcu; **Materials:** Sevda Uzun, Nurşen Kulakaç, Betül Mumcu.

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