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RESEARCH ARTICLE

Attitudes and perspectives of midwifery students towards distance education during the COVID-19 pandemic

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ABSTRACT

Objective: This study aims to determine the attitudes and perspectives of midwifery students towards distance education during the COVID-19 pandemic.

Methods: The universe of the study consists of undergraduate students who continue to study in midwifery departments in Turkey. The study universe consisted of 488 midwifery students enrolled in university midwifery programs. Midwifery students were invited to participate in the study with a convenience sampling method through WhatsApp groups and social media accounts. The data were collected with an introductory questionnaire containing socio-demographic information prepared by the researchers and the Attitude Scale towards Distance Education.

Results: It was determined that the mean age of the students participating in the study was 21.86±9.29 years; 15% were first grade, 20.5% were second grade, 35% were third grade, and 29.1% were fourth grade. The mean score of the students on the scale was determined as 90.44±26.58. There was a significant difference between the scale scores and the region of the student's school and the classes they studied. It has been observed that the scale scores of the students living in the Central and Eastern Anatolia regions and the second and third-year students are low.

Conclusion: It can be said that the midwifery department students' attitudes towards distance education in the first period of the distance education process, which started with a break from face-to-face education after the pandemic, are at a moderate level of positivity.

Keywords: COVID-19 Pandemic, Distance Education, Students, Midwifery

ÖZET

Ebelik öğrencilerinin COVID-19 pandemisi sırasında uzaktan eğitime yönelik tutum ve bakış açıları

Amaç: Bu çalışma, COVID-19 pandemisi sürecinde ebelik öğrencilerinin uzaktan eğitime yönelik tutum ve bakış açılarını belirlemeyi amaçlamaktadır.

Yöntem: Araştırmanın evrenini Türkiye'de ebelik bölümlerinde öğrenimine devam eden lisans öğrencileri oluşturmaktadır. Çalışma evrenini üniversite ebelik programlarına kayıtlı 488 ebelik öğrencisi oluşturmaktadır. Ebelik öğrencileri WhatsApp grupları ve sosyal medya hesapları üzerinden kolayda örnekleme yöntemi ile çalışmaya katılmaya davet edilmiştir. Veriler, araştırmacılar tarafından hazırlanan sosyo-demografik bilgileri içeren tanıtıcı bir anket ve Uzaktan Eğitime Yönelik Tutum Ölçeği ile toplanmıştır.

Bulgular: Araştırmaya katılan öğrencilerin yaş ortalamasının 21,86±9,29 yıl olduğu; %15'inin birinci sınıf, %20,5'inin ikinci sınıf, %35'inin üçüncü sınıf ve %29,1'inin dördüncü sınıf olduğu belirlenmiştir. Öğrencilerin ölçekten aldıkları puan ortalaması 90.44±26.58 olarak belirlenmiştir. Ölçek puanları ile öğrencilerin okullarının bulunduğu bölge ve okudukları sınıflar arasında anlamlı bir fark bulunmuştur. İç ve Doğu Anadolu bölgelerinde yaşayan öğrenciler ile ikinci ve üçüncü sınıf öğrencilerinin ölçek puanlarının düşük olduğu görülmüştür.

Sonuç: Pandemi sonrası yüz yüze eğitime ara verilmesiyle başlayan uzaktan eğitim sürecinin ilk döneminde ebelik bölümü öğrencilerinin uzaktan eğitime yönelik tutumlarının orta düzeyde olumlu olduğu söylenebilir.

Anahtar kelimeler: COVID-19 Pandemisi, Uzaktan Eğitim, Öğrenciler, Ebelik

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INTRODUCTION

COVID-19 is an infectious respiratory disease caused by the SARS-CoV-2 virus. The disease initially emerged in late 2019 in Wuhan, China. It quickly spread worldwide and was declared a pandemic by the World Health Organization (WHO) on March 11, 2020.[1] With the pandemic, radical changes occurred in various fields, including the education system, and distance education became widely adopted at all educational levels [2].

According to the International Labour Organization [3], universities worldwide shifted from in-person education to distance education to control the spread of the pandemic [4]. During the pandemic, the feasibility of learning through online means and the transfer of knowledge virtually were acknowledged [5]. As a result, according to data from UNESCO [6], over 91% of the global student population temporarily halted in-person education during the pandemic. Therefore, distance education emerged as both a significant change and a crucial solution during the COVID-19 pandemic [7].

Distance education is an e-learning environment conducted over the Internet. While this form of education has been present for some time, it was presented as the best solution during the educational crisis caused by the pandemic [7]. In Turkey, the Council of Higher Education (YÖK) determined its roadmap for distance education on March 18, 2020, for 207 universities and 7.5 million students after declaring COVID-19 cases. From March 23, 2020, digital tools and alternative methods such as assignments and projects were considered suitable for conducting classes and exams [8]. Following this announcement, education resumed across all departments of universities using synchronous, asynchronous, and blended methods [9].

Adapting to the suddenly changed education system due to the pandemic brought various advantages and disadvantages [10]. Educational institutions are accustomed to in-person learning, and students experienced challenges transitioning to this new and mandatory form of education [11,12]. While distance education yields satisfactory results in theoretical knowledge acquisition, it is insufficient to develop clinical skills [13]. This situation has negatively affected departments that train doctors, midwives, nurses, dentists, and other healthcare professionals, as practical training is equally crucial alongside theoretical education [14–16]. Students in these fields need to gain skill experience in clinical practice [17]. Decisions were made to restrict the participation of these students in clinical practices due to safety concerns, necessitating the continuation of education through distance learning methods [12,14,18]. Midwifery students faced challenges not only in participating in theoretical classes but also in the inability to perform laboratory sessions and clinical practice, leading to anxiety about their future and uncertainties [16,19].

In midwifery education, the application and assessment of clinical skills are crucial. In distance education, practical teaching and assessment of such skills are inadequate. This situation can leave students without real-world case experience and lacking essential aspects such as clinical decision-making skills and patient management. Therefore, awareness of the limitations of distance education during this process is vital, and additional support and appropriate alternative solutions should be provided to address students' deficiencies—this is crucial as the effects of education without clinical experience will have long-term implications. Graduates will carry this education with them throughout their careers, which could affect their approach to women, infants, and families in their future work environment [20].

Consequently, it is crucial to develop strategies to enhance the quality of midwifery education for the primary stakeholders in maternal health indicators (maternal and infant mortality, etc.) within countries. Determining students' opinions and needs is essential [2,14,21]. Midwifery students are among the most critical stakeholders in midwifery education and training. Thus, the current study aims to identify the attitudes and opinions of midwifery students who quickly transitioned to distance education during the initial phase of the COVID-19 pandemic. The results of this study are expected to guide the development of accessible content and scope for midwifery distance education during natural disasters and exceptional circumstances.

MATERIALS and METHODS

Study Type

A multicenter descriptive survey study involving students in midwifery departments in Turkey.

Population and Sample

The study population comprised students continuing their education in midwifery departments at universities in Turkey. The sample consisted of 488 midwifery students invited to participate in the study through convenience sampling, utilising WhatsApp groups and social media accounts of midwifery students. Participants were required to provide a valid email address, and through the verification of these addresses, multiple responses from the same individual were prevented.

Data Collection

Data for the study were collected through a survey prepared using Google Forms. Ethical approval for the study was obtained from the Karabük University Ethics Committee on June 30, 2020, with decision number 2020/08-14. The forms were collected online, and students were permitted to participate in the study online.

Data Collection Tools

The study utilised a descriptive questionnaire prepared by the researchers containing 19 questions, including socio-demographic information and the Attitude Towards Distance Education Scale (ATDES).

Attitude Towards Distance Education Scale (ATDES): The ATDES was developed by Kışla (2016) and comprises 35 items. The scale employs a 5-point Likert-type rating: "Strongly Agree" (5 points), "Agree" (4 points), "Undecided" (3 points), "Disagree" (2 points), and "Strongly Disagree" (1 point). Items 1, 2, 4, 5, 9, 11, 14, 15, 16, 18, 19, 22, 23, 25, 26, 28, 29, 33, and 34 were reverse-scored. The maximum attainable score is 175, while the minimum score is 35. The scale's internal consistency coefficient (Cronbach's Alpha) was 0.89. A higher score indicates a more positive attitude towards distance education [22].

Data Analysis

The statistical analysis of the study was evaluated using computer-assisted statistical software. The normal distribution of data was assessed using Kurtosis and Skewness tests, which showed that the data exhibited a normal distribution [23]. Obtained data were analysed through percentage and frequency distributions. As the data showed parametric distribution for comparisons between dependent and independent variables, Independent-Samples T-test was performed for two-variable groups, and the One-Way ANOVA test was used for three or more variable groups. Post Hoc tests of Tukey HSD/Tamhane's T2 were used to investigate differences between variables. Analysis results were presented as mean ± standard deviation for quantitative data. The obtained data were evaluated at a 95% confidence interval and a significance level of $p < 0.005$.

RESULTS

The findings include the attitudes and opinions of midwifery students towards distance education during the initial period of the Covid-19 pandemic, as well as the challenges they faced during the distance education process.

The participating students' mean age was 21.86±9.29, with a mean score of 90.44±26.58 for the ATDES. The internal consistency coefficient (Cronbach's Alpha) of the ATDES used in our study was found to be 0.94. The average age of the participating students was established as 21.86±9.29. It was discovered that 50.8% of students belonged to nuclear families, and 64.5% had an income equal to their expenses. Upon examination of the students' health status, it was noted that 8% had a chronic illness. In terms of educational background, 50.4% were graduates of Anatolian high schools, 59.6% studied at a university in the Black Sea region, and their academic distribution across years were as follows: 15% in the first year, 20.5% in the second year, 35.2% in the third year, and 29.1% in the fourth year. Regarding their course enrollment in the 2019-2020 academic year, it was observed that 48% took 1 to 6 courses, and 78.7% actively participated in all of their courses (Table 1).

Socio-demographic Characteristics		
Age (Mean ± SD)	21,86±9,29	
ATDES Total Score (Mean ± SD)	90,44±26,58	
Family Type	**n**	**%**
Nuclear Family	248	50,8
Extended Family	240	49,2
Income Status		
Income Less Than Expenses	113	23,2
Income Equal to Expenses	315	64,5
Income Greater Than Expenses	60	12,3
Presence of Chronic Illness		
Yes	43	8,8
No	445	91,2
High School Graduated from		
Vocational High School	105	21,5
Anatolian High School	246	50,4
Science High School	16	3,3
Religious Vocational High School	29	5,9
Other	92	18,9
Geographic Region of Enrolled University		
Black Sea Region	291	59,6
Central Anatolia Region	81	16,6
Marmara Region	102	20,9
Eastern Anatolia Region	14	2,9
Grade	n	%

1st Year	74	15,2
2nd Year	100	20,5
3rd Year	172	35,2
4th Year	142	29,1
Number of Courses Taken in Spring Semester 2019-2020		
Between 1 and 6	236	48,4
6 and above	252	51,6
Number of Live Online Classes in Spring Semester 2019-2020		
None	26	5,3
Half	78	16
All	384	78,7
Total	488	100

Table 1. Socio-demographic Characteristics of Midwifery Students

The study revealed that 66.0% of students had not taken a distance education course in previous years. In terms of accessing distance education, 50.8% used mobile phones, 64.2% had internet access at home, and 56.1% experienced internet connectivity issues. Furthermore, 93.2% of students did not receive information about using their university's distance education platform, and 46.3% considered their university's infrastructure for distance education somewhat adequate. The study also investigated students' willingness to continue distance education after the pandemic, with 43.4% indicating they did not wish to continue (Table 2).

Have you taken distance education before?	**n**	**%**
Yes	166	34,0
No	322	66,0
Method of Access to Distance Education		
Computer	234	48,0
Mobile Phone	248	50,8
Tablet	6	1,2
Method of Internet Access for Distance Education		
Home Internet	318	65,2
Mobile Phone Internet	139	28,5
Neighbour's Internet	14	2,9
Internet at a Relative's Home	17	3,5
Experience Internet Connection Issues during Distance Education		
Yes	274	56,1
No	66	13,5
Partially	148	30,3
Received Training on Using Distance Education Platforms		
Yes	33	6,8
No	455	93,2
Adequacy of Infrastructure for Distance Education at Their University		
Yes	132	27,0
No	130	26,6
Partially	226	46,3
Desire for Some Classes to Continue Remotely Due to the Mandatory Changes in Education Caused by the Pandemic		
Yes	186	38,1
No	212	43,4
Undecided	90	18,4
Total	488	100

Table 2. Distance Education Knowledge and Internet Access of Students

No significant differences were found between students' family types, income statuses, presence of chronic illnesses, and ATDES scores. However, significant differences were observed between students' regions of schooling (F=15.57, p=0.00) and grade levels (F=3.269, p=0.021) concerning their ATDES scores. The mean ATDES scores for students in different regions were as follows: 94.43 in the Black Sea region, 93.86 in the Marmara region, 74.52 in the Central Anatolia region, and 73.86 in the Eastern Anatolia region. It was noted that students residing in the Central Anatolia and Eastern Anatolia regions had lower scores. Regarding grade levels, the average ATDES scores were as follows: 97.01 for first-year students, 84.88 for second-year students, 89.48 for third-year students, and 90.44 for fourth-year students. Lower ATDES scores were observed among second and third-year students (Table 3).

Variables	**Mean ± Standard Deviation**	**Test Statistic**	**p**
Family Type		1,299*	0,195
Nuclear Family	91,98 ± 28,44		
Extended Family	88,86 ± 24,48		
Income Status			
Income Less Than Expenses	92,26 ± 23,74	0,798**	0,451
Income Equal to Expenses	89,32 ± 26,57		
Income Greater Than Expenses	92,9 ± 31,44		
Total	90,44 ± 26,59		
Presence of a Chronic Medical Condition			
Yes	87,63 ± 27,09	0,195**	0,478
No	90,71 ± 26,55		
Region of Students' Universities		F	p
Black Sea Region	94,43 ± 22,51[a]	15,57**	**0,00**
Central Anatolia Region	74,52 ± 26,01[b]		
Marmara Region	93,98 ± 32,65[a]		
Eastern Anatolia Region	73,86 ± 20,06[b]		
Total	90,44 ± 26,59		
Grade Level of Students			
1st Year	97,01 ± 18,85[a]	3,269*	**0,021**
2nd Year	84,88 ± 25,46[b]		
3rd Year	89,48 ± 29,04[b]		
4th Year	92,1 ± 27,05[a]		
Total	90,44 ± 26,59		
* Independent Samples t-test, ** ANOVA (Welch) a-b: According to Tamhane's T2 analysis, there is no significant difference between values with the same letter.			

Table 3. Relationship Between Students' Socio-Demographic Characteristics and ATDES Scores

A significant difference has been identified between students' prior experience with distance education and their mean ATDES scores (t=486, p=0.00). This difference was found to be attributed to students who had previous experience with distance education. The current study indicates a significant relationship between experiencing connectivity issues in distance education and mean ATDES scores (F=11.122, p=0.000). It is noted that this difference exists between those who experience connectivity issues partially or constantly and those who have never experienced them. There is a significant relationship between students' perceptions of the adequacy of their university's infrastructure for distance education and mean ATDES scores (F=42.539, p=0.000). Additionally, a significant relationship has been found between students' willingness for certain classes to continue with distance education after the pandemic and mean ATDES scores (F=195.497, p=0.000) (Table 4).

DISCUSSION

Midwifery is a healthcare profession that blends science and art, is built upon ethical and humanitarian values, and aims to deliver high-quality, specialised care [24]. The cornerstone of quality and secure midwifery care lies in the quality and quantity of theoretical and clinical education. Therefore, the quality and effectiveness of healthcare services rely on midwives having the necessary knowledge and skills [25]. During the initial phase of the Covid-19 pandemic in Turkey, the transition to distance education is

Variables	Mean ± Standard Deviation	Test Statistic	p
Have you taken a distance education course before?			
Yes	97,49 ± 27,87	486*	0,00
No	86,81 ± 25,19		
Experiencing connectivity issues in distance access			
Yes	86,28 ± 25,6[a]	11,122*	0,00
No	102,45 ± 33,64[b]		
Partially	92,8 ± 22,84[b]		
Total	90,44 ± 26,59		
Evaluation of universities' distance education infrastructure			
Experienced	102,44 ± 28,36[a]	41,539*	0,00
Not Experienced	75,1 ± 23,09[b]		
Partially Experienced	92,26 ± 23,07[a]		
Total	90,44 ± 26,59		
The desire for some classes to continue with distance education after the pandemic			
Yes	110,77 ± 23,5[a]	195,497*	0,00
No	71,49 ± 17,72[b]		
Undecided	93,09 ± 15,75[a]		
Total	90,44 ± 26,59		
* Independent Samples t-test, ** ANOVA (Welch) a-b: According to Tamhane's T2 analysis, no significant difference exists between values with the same letter.			

Table 4. Relationship Between Attitudes Towards Distance Education and ATDES Scores

believed to have negatively impacted the quantity of education due to the inability to conduct practical classes in midwifery programs.This study aimed to determine the attitudes and perspectives of midwifery students who could not engage in practical clinical training during the remote education period of the COVID-19 pandemic. The findings were discussed in light of the literature.

In the study, 65.2% of midwifery students reported internet access at home, with 50.8% participating in classes via mobile phones. Additionally, 56.1% experienced internet connectivity issues. Similar to the present study, Karaman et al. (2021) found that most nursing students had internet access at home [26]. Şener et al. (2022), in their study on nursing students' perspectives on online learning during the pandemic, also identified that a majority of students participated in classes from home and through their phones [27]. Another study by Terkeş and Uçan Yamaç (2021) demonstrated that midwifery and nursing students experienced internet connectivity problems [28]. The increased reliance on the Internet for communication in various sectors, including education, is believed to contribute to such challenges. The high usage of mobile phones among students can be attributed to their convenience, practicality, and the fact that they don't require sitting at a desk for extended periods.

The study revealed that midwifery students' attitudes towards remote education during the early stages of the pandemic were moderately positive (mean score: 90.44) (Table 1). The literature contains both supporting and opposing studies regarding this finding. A study conducted by Vaizoğlu and Uysal (2022) using the same measurement tool on nursing students also found a moderately positive attitude towards remote education during the pandemic (mean score: 100.6) [29]. Similar studies employing different measurement tools during the pandemic have shown that students' attitudes towards online learning or remote education were also moderately positive [27,30,31]. However, the literature also includes studies where students displayed a negative attitude towards remote education [26,32,33]. In this study, midwifery students' moderately positive attitude towards distance education stems from the uncertainties posed by the pandemic, challenges encountered during remote education, the inability to reinforce theoretical education with practical laboratory applications, and the inability to engage in clinical training.

When examining the average ATDES scores based on the region where students' universities are located, a

statistically significant difference was found between students from the Black Sea Region and the Marmara Region ($p<0.001$). Students from the Black Sea Region had higher scores, while students from the Central Anatolia and Eastern Anatolia Regions had lower scores. This suggests that regional differences could influence students' attitudes towards remote education. A statistically significant difference in ATDES score averages was also based on students' grade levels ($p=0.021$). Second and third-year students had lower ATDES scores, whereas first and fourth-year students had higher scores. The findings of this study are consistent with the results of a study conducted by Kul Uçtu and Uğurlu (2022) on midwifery students' attitudes towards remote education at a university [31]. However, the study by Durgun et al. (2021) on nursing students indicated that third-year students had more positive attitudes towards remote education, which differed from our study's findings [30]. This result could be explained by first-year students being at the beginning of their midwifery education, having higher motivation and energy, and feeling secure with their families during the pandemic. Fourth-year students may be less affected by practical limitations than other classes due to their proximity to graduation.

The study asserted that students who had prior experience with distance education had higher mean scores on the ATDES (Attitude Towards Distance Education Scale), and the difference between those who were experiencing distance education for the first time was statistically significant ($p<0.001$). Prior experience is reported to greatly facilitate the transition to distance education [34], a finding supported by the results of this research. It is known that some universities in our country conducted compulsory elective courses in a distance education format before the pandemic. Therefore, it is assumed that students without prior experience in distance education received education in institutions where such practices were outside the scope. Additionally, it was observed that students facing internet connectivity issues and negatively evaluating their university's distance education infrastructure had lower mean ATDES scores. This highlights that factors such as internet connectivity issues and inadequate infrastructure hinder students from fully benefiting from distance education.

In the study, the majority of students (43.8%) indicated that they did not prefer some classes to continue with distance education after the pandemic. On the other hand, students who expressed a desire for certain classes to continue with distance education after the pandemic had higher mean ATDES scores—this suggests that students who embrace the distance education model have a more positive attitude towards it. Similar studies conducted on midwifery and nursing students are consistent with our findings, revealing that the majority of students preferred face-to-face education [27,28,31,35,36]. Since midwifery students have practical training, they are aware that laboratory and clinical applications enhance their professional skills, which may explain their reluctance to receive lectures through distance education. A qualitative study evaluating midwifery students' views on distance education during the pandemic in Turkey revealed that students reported a lack of self-confidence due to not engaging in clinical practice, which increased their fear of making mistakes [21]. It is thought that distance education could be a supportive method for midwifery education, but its sole usage could negatively impact the quality and quantity of education.

The study, conducted in the early stages of the pandemic, is limited by the fact that the data collection tool was not specific to the pandemic and that the data was obtained using a widely applicable scale for attitudes towards distance education. This study is one of the rare investigations into the attitudes and opinions towards distance education among midwifery undergraduate students nationwide. Consequently, it contributes to a limited pool of data in the field. Furthermore, it serves as an essential resource for understanding and enhancing the impact of distance education in midwifery education.

CONCLUSION

The study's findings reveal that midwifery students' attitudes towards distance education are moderately positive and that factors influencing their attitudes are complex. Students' prior experience with distance education, their academic year, internet connectivity issues, university infrastructure, the geographic region of the university, and opinions regarding the continuation of distance education after the pandemic play significant roles in shaping students' attitudes towards distance education. Furthermore, concerns about the inability to conduct clinical practices through distance education contribute to students' hesitations. Therefore, when planning and implementing distance education processes, these factors should be taken into account.

In times of crises such as natural disasters or unusual events, distance education emerges as a crucial platform as it prevents a complete halt in education, enabling the continuation of the process. While replacing clinical applications entirely with distance education in midwifery education may be challenging, solution-focused and feasible approaches should be developed to adapt to crises and maximise students' education quality. Based on student feedback, midwifery associations, relevant institutions, and educational programs are recommended to collaborate and establish a mission for how midwifery education will be sustained during exceptional circumstances. Additionally, it is suggested to conduct both quantitative and qualitative studies to assess the impact of distance education on midwifery students' knowledge and skills.

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REFERENCES

1. WHO. Who Coronavirus Disease (Covid-19) Dashboard [Internet]. 2020. Available from: https://covid19.who.int/
2. Rose S. Medical student education in the time of COVID-19. Jama. 2020;323(21):2131–2.
3. ILO. International Labor Organization Rapor [Internet]. 2020. Available from: https://www.ilo.org/ankara/areas-of-work/covid-19/WCMS_742726/lang-- tr/index.htm,
4. Gewin V. Five tips for moving teaching online as COVID-19 takes hold. Nature. 2020;580(7802):295–6.
5. Jena PK. Online learning during lockdown period for COVID-19 in India. *Int J Multidiscip Educ Res.* 2020;9(5):82-92.
6. UNESCO. Distance learning solutions [Internet]. 2020. Available from: https://en.unesco.org/covid19/educationresponse.
7. Viner RM, Russell SJ, Croker H, et al. School closure and management practices during coronavirus outbreaks including COVID-19: a rapid systematic review. The Lancet Child & Adolescent Health. 2020;4(5):397–404.
8. YÖK. Statement on distance education to be implemented in [Internet]. 2020 [cited 2023 Jul 4]. Available from:https://www.yok.gov.tr/Sayfalar/Haberler/2020/universitelerde-uygulanacakuzaktan-egitime-iliskin-aciklama.aspx.
9. Serçemeli M, Kurnaz E. A research on students' perspectives on distance education and distance accounting education during the Covid-19 pandemic period. International Journal of Social Sciences Academic Research. 2020;4(1):40–53.
10. Zan N, Zan BU. Education in Emergency Situation with Coronavirus: An Overview of Faculty of Letters Students Participating in the Distance Education System from Different Regions of Turkey. Electronic Turkish Studies. 2020;15(4).
11. Abohelwa M, Elmassry M, Abdelmalek J, Payne D, Nugent K. 2019 novel coronavirus vaccination among postgraduate residents and fellows. Journal of Primary Care & Community Health. 2021;12:21501327211022978.
12. Lazenby M, Chambers S, Chyun D, et al. Clinical nursing and midwifery education in the pandemic age. International Nursing Review. 2020;67(3):323–5.
13. Abbasi MS, Ahmed N, Sajjad B, et al. E-Learning perception and satisfaction among health sciences students amid the COVID-19 pandemic. Work. 2020;67(3):549–56.
14. Akyıldız D. Distance education of midwifery students during the COVID-19 pandemic: Challenges and recommendations. *Eur J Midwifery*. 2021;5:25. Published 2021 Jul 12. doi:10.18332/ejm/138594.
15. Coxon K, Turienzo CF, Kweekel L,et al. The impact of the coronavirus (COVID-19) pandemic on maternity care in Europe. Midwifery. 2020;88:102779.
16. Kaya N, Guler H. Examining the Solution-focused Thinking and Hope Levels of Turkish Midwifery Students During Distance Education: A Cross-sectional Study. Modern Care Journal. 2023;20(2).
17. Yılmaz T, Karanisoğlu H. Current situation of midwifery education in Turkey. J Health Sci Prof. 2016;3(1):73–7.
18. Mucuk S, Ceyhan Ö, Tekinsoy Kartın P. Distance nursing education during the COVID-19 pandemic: National experience. Izmir Katip Çelebi University Faculty of Health Sciences Journal. 2021;6(1):33–6.
19. Aristovnik A, Keržič D, Ravšelj D, Tomaževič N, Umek L. Impacts of the COVID-19 pandemic on life of higher education students: A global perspective. Sustainability. 2020;12(20):8438.
20. Renfrew MJ, Cheyne H, Craig J, et al. Sustaining quality midwifery care in a pandemic and beyond. Midwifery. 2020;88:102759.
21. Topuz Ş, Sezer NY, Aker MN, et al. A SWOT analysis of the opinions of midwifery students about distance education during the Covid-19 pandemic a qualitative study. Midwifery. 2021;103:103161.
22. Kışla T. Attitude scale development study towards distance education.Ege Journal of Educ.2016;17(1):258–71.
23. George D. SPSS for windows step by step: A simple study guide and reference, 17.0 update, 10/e. Pearson Education India; 2011.
24. Karahan N. Midwifery as a Profession. In: Basic Concepts and Skills in Health Practices. 7th ed. Nobel Medical Bookstore; 2017.
25. Özkoçak Tuna F, Divlek N, Karahan N, Kızıltepe K, Üstün Y. Evaluation of the virtual field experience training program accompanied by simulation for midwifery department students who could not complete their clinical practice training during the pandemic period: A retrospective review (Etlik Zübeyde Hanım Gynecology Training and Research Hospital Online Training Model Example). Turkish Journal of Women's Health and Neonatology. 2023;5(1):6–13.
26. Karaman F, Çakmak S, Yerebakan AN. Education of nursing students during the Covid-19 pandemic: distance education process and its effects. Istanbul Gelisim University Journal of Health Sciences. 2021;(15):571–80.
27. Şener Y, Şener Taplak A, Höbek Akarsu R. Nursing students' opinions and attitudes towards online learning during the COVID-19 pandemic. Value in Health Sciences. 2022;12(1):137–46.
28. Terkeş N, Yamaç SU. Opinions and suggestions of nursing and midwifery students regarding distance education during the COVID-19 pandemic process. Ordu University Journal of Nursing Studies. 2021;4(2):240–7.
29. Vaizoğlu D, Uysal N. Examining the attitudes of nursing students towards distance education and their perceptions of the nursing profession during the Covid-19 pandemic period. Journal of Health and Life Sciences. 2022;4(2):218–25.
30. Durgun H, Can T, Avcı AB, Kalyoncuoğlu B. Nursing students' opinions and anxiety levels about distance education during Covid-19. Dokuz Eylül University Faculty of Nursing Electronic Journal. 2021;14(2):141–7.
31. Kul Uçtu A, Uğurlu M. Examination of Factors Affecting Midwifery Department Students' Attitudes Towards Distance Education. World of Medical Education. 2022;21(65):84–94.
32. Diab G, Elgahsh NF. E-learning during COVID-19 pandemic: Obstacles faced nursing students and its effect on their attitudes while applying it. American Journal of Nursing. 2020;9(4):300–14.
33. Wang T, Mantini D, Gillebert CR. The potential of real-time fMRI neurofeedback for stroke rehabilitation: a systematic review. cortex. 2018;107:148–65.
34. Luyben A, Fleming V, Vermeulen J. Midwifery education in COVID-19-time: Challenges and opportunities. Midwifery. 2020;89:102776.
35. Geraghty S, Bromley A, Bull A, Dube M, Turner C. Millennial midwifery: Online connectivity in midwifery education. Nurse Education in Practice. 2019;39:26–31.
36. Murat Öztürk D, Uzun B. Opinions of Midwifery Students on Distance Education Process and Practical Courses in COVID-19 Period: A Mixed-Method Study. Ebelik ve Sağlık Bilimleri Dergisi. 2022;5(2):62