ORİJİNAL MAKALE / ORIGINAL ARTICLE
Balıkesir Sağlık Bilimleri Dergisi / BAUN Sağ Bil Derg
Balıkesir Health Sciences Journal / BAUN Health Sci J
ISSN: 2146-9601- e ISSN: 2147-2238
Doi: https://doi.org/10.53424/balikesirsbd.1341069

The Effects of Distance Education on Midwifery Students Before Clinical Practice in the Pandemic

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Geliş Tarihi / Received: *10.08.2023,* ***Kabul Tarihi / Accepted:*** *15.04.2024*

ABSTRACT
Objective: This research was conducted to determine distance education's positive and negative effects on midwifery students before clinical practice. **Materials and Methods:** The population of this descriptive and cross-sectional study consisted of 194 students (106 first-year and 88 second-year students) studying in the first and second year of the Department of Midwifery, Faculty of Health Sciences of a state university in Turkey. The data collection form, which the researchers prepared by reviewing the literature, consists of 49 questions, including the participants' socio-demographic characteristics and views on distance education. **Results:** 72.9% of the participants stated that they disapproved of distance education, and approximately 30% stated that they did not have suitable living conditions for distance education. Participants also reported that the transition to distance education negatively affected the quality and participation rates of laboratory and clinical applications of the courses. The learning tools that students found most valuable during distance education were online lecture notes (83.9%), smartphones (81%), internet access (76.1%) and computers (72.5%). Students stated that they most frequently used the student information system (82.3%) and the university web page (77.9%) to be informed about educational changes, while they least frequently followed television news. **Conclusion:** In our study, it was determined that web-based distance education, which was used as an alternative solution in the pandemic, interrupted the practice education of midwifery students and negatively affected participation in classes.
Keywords: COVID-19, Distance Education, Midwifery.

Pandemide Klinik Uygulama Öncesi Uzaktan Eğitimin Ebelik Öğrencileri Üzerindeki Etkileri

ÖZ
Amaç: Bu araştırma, ebelik öğrencilerine uzaktan eğitimin klinik uygulama öncesi olumlu ve olumsuz etkilerini belirlemek amacıyla yapılmıştır. **Gereç ve yöntem:** Tanımlayıcı ve kesitsel tipteki bu araştırmanın evrenini Türkiye'de bir devlet üniversitesinin Sağlık Bilimleri Fakültesi Ebelik Bölümü birinci ve ikinci sınıfında öğrenim gören 106 birinci sınıf ve 88 ikinci sınıf olmak üzere toplam 194 öğrenci oluşturmuştur. Araştırmacılar tarafından literatür taranarak hazırlanan veri toplama formu, katılımcıların sosyo-demografik özellikleri ve uzaktan eğitime ilişkin görüşlerini içeren toplam 49 sorudan oluşmaktadır. **Bulgular:** Katılımcıların %72.9'u uzaktan eğitimi onaylamadığını ve yaklaşık %30'u uzaktan eğitim için uygun yaşam koşullarına sahip olmadıklarını belirtmişlerdir. Katılımcılar ayrıca uzaktan eğitime geçişin derslerin laboratuvar ve klinik uygulamalarının kalitesini ve katılım oranlarını olumsuz etkilediğini bildirmişlerdir. Öğrencilerin uzaktan eğitim sürecinde en değerli buldukları öğrenme araçları çevrimiçi ders notları (%83.9), akıllı telefonlar (%81), internet erişimi (%76.1) ve bilgisayarlardır (%72.5). Öğrenciler, eğitimle ilgili değişikliklerden haberdar olmak için en sık öğrenci bilgi sistemi (%82.3) ve üniversite web sayfasını (%77.9) kullandıklarını belirtirken, en az televizyon haberlerini takip ettiklerini ifade etmişlerdir. **Sonuç:** Çalışmamızda pandemide alternatif bir çözüm olarak kullanılan web tabanlı uzaktan eğitimin ebelik öğrencilerinin uygulama eğitimlerini sekteye uğrattığı ve derslere katılımı olumsuz etkilediği tespit edilmiştir.
Anahtar Kelimeler: COVID 19, Uzaktan Eğitim, Ebelik.

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Bu makaleye atıf yapmak için / Cite this article: Acar Bektaş, H., Çıtak, G. & Alparslan, Ö. (2024). The effects of distance education on midwifery students before clinical practice ın the pandemic. *BAUN Health Sci J, 13*(2), 381-389. https://doi.org/10.53424/balikesirsbd.1341069

INTRODUCTION

With the pandemic, changes have been experienced in many areas, such as transportation, food, education, economy, health, etc. However, education has been most affected (Terkeş & Uçan Yamaç, 2021). First, the closure of schools and then the decision to switch to distance education disrupted education (Kurnaz & Serçemeli, 2020; Viner et al., 2020). Universities quickly adapted to these decisions through distance education centers and started education (Kurnaz & Serçemeli, 2020; Zhong et al., 2020). Academics, students, and parents involved in the education process have faced new experiences they have never experienced before (Zan & Zan, 2020). The process was managed with these changes that brought advantages and disadvantages. While some universities prefer to use online synchronous, some offline asynchronous, and some mixed methods as distance education methods, it is stated that the way the courses are taught is left to the instructor's own will in some units (Kurnaz & Serçemeli, 2020; Zan & Zan, 2020).

In midwifery education, both theory and practice should be carried out simultaneously. It is difficult to maintain this education with distance education, and alternative methods should be used. However, in this pandemic, where face-to-face education could not be provided, distance education had to be implemented quickly to manage the education process effectively (Brooks et al., 2020). Universities with good infrastructure and a previous online education system had no problems in the transition, but inexperienced universities struggled to skip the process. Not only in terms of universities, but students also faced many troublesome situations as they did not have the necessary equipment. Most institutions did not cancel clinical practices and tried to continue them during the pandemic. However, due to the increasing number of cases, a sudden closure decision was made during clinical internships (Ferrel & Rian, 2020).

A study conducted in the literature during the distance education period stated that students experienced stress in exams conducted remotely. The reasons for this were exam duration, navigation mode, and technical problems (Elsalem et al., 2020). In another study covering all midwifery students in Turkey, it was determined that 5% of the students experienced moderate and high levels of anxiety (Söğüt et al., 2020). In another study conducted in Peru on the subject, attention was drawn to the anxiety experienced by midwifery students in hospital studies. Among the reasons that strengthen anxiety, reasons such as insufficient protective equipment, economic problems, and anxiety about not being treated in case of illness due to lack of health insurance were listed (Rojas-Silva et al., 2020).

In Turkey, limited studies have been found in the literature on nursing and midwifery students' views on distance education. Addressing this knowledge gap is critical to understanding the effects of a global pandemic and to better prepare for similar major disruptions in student education and practice for a future where pandemics are inevitable (Dodds, 2019). Our study was conducted to determine the opinions and evaluations of first and second-year midwifery students regarding the positive and negative effects of distance education before clinical practice.

MATERIALS AND METHODS

Our distance education plans during the pandemic

All educational institutions had started to continue their education activities on distance education since the spring term of 2019-2020 when the COVID-19 pandemic emerged. In this process, as in all applied sciences, all clinical practices in midwifery education were postponed to the summer period when the transition to face-to-face education would occur. Clinical applications could not be carried out in the summer as the pandemic continued. In the spring term of the 2020-2021 academic year, educational activities continued on distance education again, and necessary plans were made in our institution for both first-year midwifery students and second-year students who had no clinical practice opportunity so that they could do clinical practice in the summer term (Table 1). BigBlueButton was used for distance education.

Study type

This is a cross-sectional study.

Time and place of the research

Data were collected in April 2021 at a Health Sciences Faculty Midwifery Department of a state university in Türkiye before distance learning students started clinical practice.

Population and sample of the research

The population of this study consisted of a total of 194 students (106 first-year and 88 second-year students) studying in the first and second years. No sample selection procedure was implemented. All of the students who accepted to participate in the study were included. The research was completed with 181 participants, including 99 first-year and 82 second-year students. Midwifery 3rd and 4th-grade students were not included in this research because they had previously performed clinical practice.

Data collection tools

The data collection form prepared by the researchers following a review of the literature consisted of questions about the socio-demographic characteristics of the participants (8 questions) and their views on distance education (40 questions) (McCutcheon et al., 2015; Shahrvini et al., 2021).

Collection of data

The researchers collected the data using online questionnaires created on Google Forms.

Data analysis

Study data were analyzed using the Statistical Package for Social Sciences (SPSS 22.0) software. Descriptive statistics and measurements (mean, standard deviation, minimum and maximum values, and percentiles) were used to evaluate the study's findings.

Table 1: Participants' teaching-learning process and data collection time.

	2019-2020			2020-2021		
Groups*	**Fall+Winter** (Sep-Oct-Nov-Dec-Jan)	**Winter+Spring** (Febr-Mar-Apr-May)	**Summer** (Jun-Jul-Aug)	**Fall+Winter** (Sep-Oct-Nov-Dec-Jan)	**Winter+Spring** (Febr-Mar-Apr-May)	**Summer** (Jun-Jul-Aug)
GROUP A (Second-year students)	Face-to-face education.	Face-to-face education in the first four weeks. Distance education is available in the second week of March.	Clinical practice was planned but could not be implemented.	Distance education.	Distance education.	Clinical practice was planned.
GROUP B (First-year students)	-	-	-	Distance education.	Distance education.	Clinical practice was planned.
Data collection	-	-	-	-	April 2021	-

Ethical considerations

Before starting the study, written permission was obtained from the Gaziosmanpaşa University Social and Human Research Ethics Committee (dated 09.04.2021 and 08.04) and the institution where the research will be conducted (26.02.2021-17369). The Declaration of Helsinki conducted the research, and informed consent was obtained from the students who agreed to participate.

RESULTS

According to the findings, 54.7% of the participants were first-year students, all single, and 63.5% were Anatolian high school graduates. 77.9% of the mothers and 54.1% of the fathers were primary and secondary school graduates. None of the students had a good income, 76.2% had extended families, and 71.3% lived in a city (Table 2).

Table 2: Participants' socio-demographic characteristics (n=181).

Participants' characteristics		**n (%)**
School year	1	99 (54.7)
	2	82 (45.3)
Marital status	Single	181 (100)
High school graduation	Anatolian	115 (63.5)
	Others	66 (36.5)
Mother's education	Elementary-middle school	141 (77.9)
	High school and above	40 (22.1)
Father's education	Elementary-middle school	98 (54.1)
	High school and above	83 (45.9)
Income status	Poor (Income<expenses)	47 (26)
	Middle (Income=expenses)	134 (74)
Place of residence	Village/Town	52 (28.7)
	City/Metropolis	129 (71.3)
Family type	Core	43 (23.8)
	Extended	138 (76.2)
Total		181 (100.0)

As seen in Table 3, 72.9% of the participants did not approve of distance education, and more than half thought they could not gain midwifery knowledge and skills through this system and that the excess number of students could create limitations. On the positive side, more than half of the participants (60.8%) reported that giving and receiving feedback between the learner and the instructor was easy in the distance education system (Table 3).

According to the participants, the distance education process positively affected the quality of the theoretical part of the courses and the exams and the rates of students' participation in them (42.3%-45.8% for quality and 40.9%-44.7% for participation, respectively) and negatively affected the quality of the laboratory and practice and the rates of students' participation in them (72.9%-75.7% for quality and 72.9%-72.4% for participation, respectively) (Table 4).

Table 3: **Participants' views about distance education (n=181).**

Statements about participants' views	**Answer**	**n (%)**
I approve of distance education in midwifery.	**Yes**	49 (27.1)
	No	132 (72.9)
I think I can gain midwifery knowledge and skills through activities based on listening in the distance education system.	**Yes**	73 (40.3)
	No	108 (59.7)
I think I can gain midwifery knowledge and skills through practice-based activities in the distance education system.	**Yes**	69 (38.1)
	No	112 (61.9)
Giving and receiving feedback between the learner and the teacher is easy in the distance education system.	**Yes**	110 (60.8)
	No	71 (39.2)
The excess number of students in the distance education system may create communication limitations.	**Yes**	110 (60.8)
	No	71 (39.2)
Total	**Yes**	181 (100)*
	No	

*: Yes+No

Table 4: The participants' views about the quality of the curriculum components of distance education and their participation in these components (n=181).

Quality of education and participation		**The theoretical part of the courses**		**The practical part of the courses**		**The laboratory part of the courses**		**Exams of courses**	
		Quality	**Participation**	**Quality**	**Participation**	**Quality**	**Participation**	**Quality**	**Participation**
Negative effect	**n (%)**	31 (17.1)	38 (21.0)	137 (75.7)	131 (72.4)	141 (77.9)	132 (72.9)	43 (23.8)	43 (23.8)
No effect	**n (%)**	73 (40.6)	69 (38.1)	23 (12.7)	27 (14.9)	24 (13.3)	34 (18.8)	55 (30.4)	57 (31.5)
Positive effect	**n (%)**	77 (42.3)	74 40.9)	21 (11.6)	23 (12.7)	16 (8.8)	15 (8.3)	83 (45.8)	81 (44.7)
Total	**n (%)**	181 (100)	181 (100)	181 (100)	181 (100)	181 (100)	181 (100)	181 (100)	181 (100)

Participants stated that the learning tools they found most valuable in the distance learning process were online lecture notes/presentations (83.9%), smartphones (81%), internet access (76.1%), and computers (72.5%). On the other hand, 24% of the participants stated that they never used tablets and did not find them valuable (Figure 1).

The distance education process cost students an additional 71.3%, and 29.3% of them stated that this cost was more than 500 TL. While 53.6% of the students stated that continuing education with the co-education model would be appropriate after the pandemic, 60.8% of them evaluated their distance education experience as negative.

Participants found the student information system (82.3%) and the university web page (77.9%), which were used to report changes in courses during the distance education process, to be the most effective methods (Figure 2).

It was determined that approximately 30% of the students did not have the living conditions, study environment, technology, and internet access required for distance learning (Figure 3).

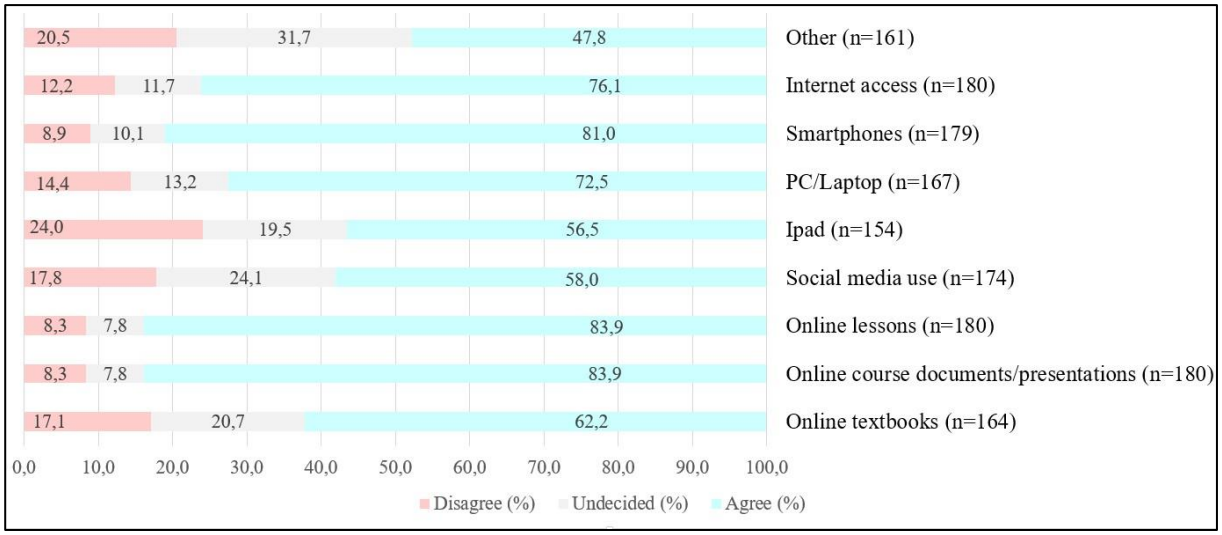

Figure 1: Participants' views about the value of the tools they used during the distance education process before starting clinical practice.

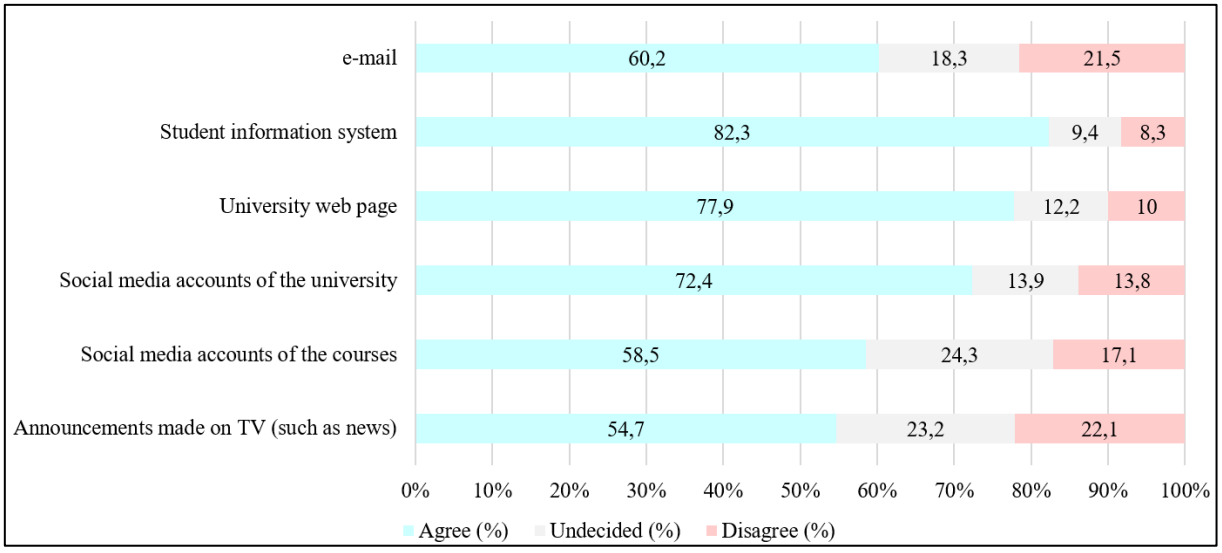

Figure 2. Opinions on the effectiveness of methods related to the reporting of changes in the distance education process

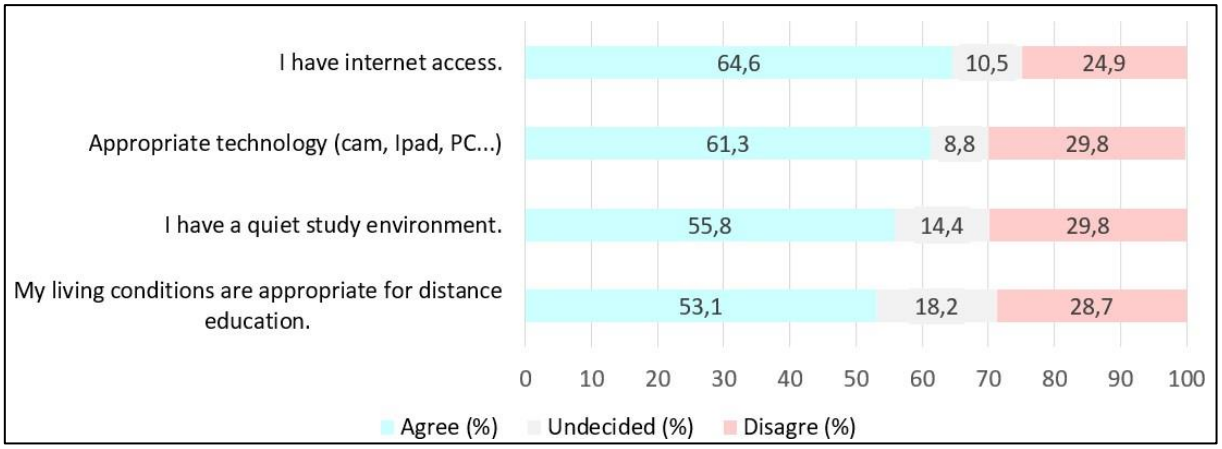

Figure 3. Current opportunities for students for distance education.

DISCUSSION

The COVID-19 pandemic has forced the education process worldwide to quickly switch to distance learning platforms (Rose, 2020). Not surprisingly, this has created great challenges for educators, students, and administrators (Ferrel & Ryan, 2020; Liang et al., 2020; Moszkowicz et al., 2020; Pather et al., 2020). The effects of COVID-19 on health education have been discussed in the literature (Rose, 2020; Sandhu & Wolf, 2020; Theoret & Ming, 2020; Goldhamer et al., 2020), but most of these studies do not show students' perspectives. In some of these studies, the preclinical experiences of students in the field of health (Pather et al., 2020; Moszkowicz et al., 2020; Gaur et al., 2020; Mukhtar et al., 2020; Sandhaus et al., 2020; Sani et al., 2020) have been evaluated, and a single curriculum component such as anatomy has been focused on others (Iwanaga et al., 2021; Longhurst et al., 2020; Moszkowicz et al., 2020; Pather et al., 2020).

According to our findings, most students stated that they did not approve of distance education and that the application and laboratory studies of the courses were insufficient. According to previous studies, it has been determined that students prefer distance education for the theoretical parts and face-to-face education for the practical and laboratory parts, and their satisfaction rates with distance education are low (Al-Balas et al. et al., 2020; Şahbaz, 2020; Shahrvini et al., 2021; Taye et al., 2022). However, some of the students also found distance education useful during the pandemic with advantages such as reduced travel time and associated travel costs, comfort in the home environment, and increased self-discipline (Oboskalova et al., 2021; Stevanović et al., 2021; Karadağ et al., 2021).

One of the striking findings of our study was that one-third of the participants stated that they did not have the living conditions, working environment, technology, and internet access necessary for distance learning. This situation negatively affected the participants' satisfaction with distance education. According to studies, students' views and satisfaction with distance education during the pandemic were affected by their access to computers and the internet and the facilities they had (Ince et al., 2020; Stevanović et al., 2021; Tayem et al., 2022).

Approximately half of the participants stated that the quality of the exams was positively affected by this process. The opportunity to access lecture notes and videos uploaded to the distance education system at any time and to listen to the recorded lectures repeatedly benefited the students, and their academic success grades increased. According to the studies, the GPAs of the students studying during the pandemic increased in general (Al-Balas et al., 2020; Oboskalova et al., 2021; Karadağ et al., 2021; Tayem et al., 2022). Some studies stated that satisfaction was low due to cheating behaviors in online exams and low exam quality (Cirakoğlu, Ozbay, 2022; Elsalem et al., 2021). Some of the challenges of distance education are exam security and assessment issues. According to the studies, it is as essential to make the systems more secure in terms of security vulnerability as it is to ensure that the assessment and evaluation activities are of a quality that will enable the assessment of the high-level thinking skills of 21st-century learners (Shahrvini et al., 2021; Baran, 2020).

CONCLUSIONS

Although the participants thought of distance learning as an advantage during the pandemic, they stated that

it was less effective when compared to face-to-face learning. Learning became entirely negative when they did not master technology and had difficulties accessing distance education platforms. Midwifery is an applied department, and education in this department cannot be carried out only through online courses; it needs to be reinforced with laboratory and hospital practices. However, under compulsory conditions such as pandemics, the Internet infrastructure should be strengthened, the training and adaptation of the teaching staff should be ensured, materials suitable for this process should be developed, and an effective e-learning environment should be created. In addition, it is thought that the development of e-learning as a support for formal education will benefit students and teachers.

Acknowledgment
The authors would like to sincerely thank anyone who contributed to this study.

Conflict of Interest
The author declares no potential conflicts of interest concerning this article's research, authorship, and/or publication.

Author Contributions
Plan, design: HAB, GÇ, ÖA; **Materials and Methods:** HAB, GÇ, ÖA; **Data analysis and interpretation:** HAB, GÇ; **Writing and corrections:** HAB, GÇ.

Funding
None

Ethical considerations
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