



## THE EFFECT OF DISTANCE EDUCATION ON THE PROFESSIONAL COMPETENCE AND ACADEMIC MOTIVATION OF MIDWIFERY STUDENTS: A QUALITATIVE STUDY

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**Abstract:** With the COVID-19 pandemic, the online teaching model has been used for the first time, and this has led to significant changes in departments such as midwifery, where theory and practice are combined. This study aimed to determine the effect of distance education on the professional competence and academic motivation of midwifery students. This study was carried out at a national university in Kastamonu, Türkiye between March and September 2021. The study adopted a qualitative design, and participants (n = 20) were the third-year midwifery students. Data were collected by conducting in-depth semi-structured face-to-face interviews using a pilot-tested interview guide. The interviews were conducted through webinars and the interviews were recorded. The interviews were held in a relaxed and calm environment where both researchers were present. The interviews were conducted with no more than two students in one day and the interview records were transcribed on the same day. Each interview lasted about 40 minutes. The researchers followed a systematic data analysis procedure which is an appropriate method of analysis when aiming to create knowledge based on experiences and meanings from cross-case analysis. The third-year midwifery students closest to graduating from the Faculty of Health Sciences participated in the study. With the individual and in-depth interviews, the responses of the midwifery students were subsumed under the following six themes: (1) 'a new learning experience, (2) reluctance to learn new information, (3) inadequacy in professional skills, (4) lack of self-confidence, (5) not being able to join a multidisciplinary team, (6) anxiety about future professional life'. It has been determined that distance education in midwifery education in Türkiye has many pleasing and facilitating features as well as obstructive and worrying aspects. In addition, online education negatively affected the psychomotor skill development of students. It is recommended that institutions providing education to midwifery students be aware of the difficulties experienced and follow different methods for psychomotor skills training.

**Keywords:** Online learning, Midwifery, Covid- 19, Motivation, Students

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### 1. Introduction

In December 2019, a novel coronavirus (SARS-CoV-2) emerged, headquartered in Wuhan, China, which led to an epidemic of the acute respiratory syndrome (COVID-19) in humans (Zhou et al., 2020). The virus has spread rapidly to many countries and was declared a pandemic by the World Health Organization (WHO) on March 11th, 2020, as it led to the death of more than 4000 people at the time (Park, 2020). This process has affected individuals and society in many ways (Karataş, 2020). Against the virus that threatens the world, national governments had to take radical measures such as social isolation, quarantine, martial law, and travel restrictions to control the spread of the epidemic (Bourouiba, 2020). The COVID-19 pandemic has affected all aspects of human activities globally, including education, research, sports, entertainment, transportation, worship, social gatherings, economics, and politics (Onyema et al., 2020). In all countries affected by the epidemic, a distance education system was used instead of face-to-face

education to slow down the epidemic with the support of the states (Yamamoto and Altun, 2020). In Türkiye, the Council of Higher Education has made decisions for switching the teaching process to distance education in the spring semester of 2020 to manage this process and the crisis (CHE, 2020). Distance education has also brought some difficulties in universities providing education in the field of health. Midwifery education is a process that integrates theoretical knowledge with training applied in laboratories and clinics. The International Confederation of Midwives (ICM) has developed a minimum educational standard for curricula. It has been emphasized that the midwifery curriculum should include at least 50% practical and 40% theoretical courses (ICM, 2013). During the pandemic, midwifery students have taken a break from clinical training, and clinical training is carried out in the form of simulations, case discussions, and assignments. The clinical setting also allows students to gain professional competence. Midwifery education aims to provide



students with the knowledge, skills, behaviors, and values necessary for professional competence. Students who graduate competently will make a significant contribution to the field of health, such as improving the standards of their profession, ensuring patient safety, and improving the quality of care (Lin et al., 2017). It was stated in the report of the Turkish Medical Association that constantly changing online health education since the beginning of the pandemic will create difficult-to-fill gaps, which will lead to inadequate professional responsibility in the future. In the study, it was observed that most of the students experienced anxiety about their professional experience (Turkish Medical Association, 2020).

Since students who do not have sufficient motivation are not ready to learn, the academic motivation of students is of importance in ensuring professional competence. Academic motivation is an internal process that drives activity aimed at achieving educational success. Studies have reported that motivation to learn is one of the decisive factors in the achievement of learning objectives (Puspitarini and Hanif, 2019), develops a positive attitude towards courses (Akandere et al., 2010), affects their academic achievement, and performance (Khalila, 2015). In addition, online students tend to participate less and have high attrition rates, motivation is a topic that instructional designers should consider when creating online classes (Kyewski and Krämer, 2018). Evaluating the impact of distance education on students' professional competence and academic motivation is important to assess whether midwifery education has achieved its goals and learning outcomes for the students. Also, it is thought that the results obtained from our study will provide guidance for planning and developing midwifery education in unexpected crisis periods. On the other hand, it is thought that it will contribute to revealing the needs for the use of digital tools in education for learning performance and motivation. There is no study on this subject in the literature. Therefore, it is believed that this study will contribute to the literature in this regard. Thus, this study aims to investigate the effect of distance education provided during the COVID-19 on the professional competence and academic motivation of midwifery students.

## 2. Materials and Methods

### 2.1. Research Design

This study was designed as descriptive phenomenological qualitative research. The general purpose of descriptive phenomenological qualitative research is to understand and define a specific topic in-depth based on the experiences of individuals (Creswell and Poth, 2016). The study aims to define, interpret, and understand the effect of distance education given during the COVID-19 pandemic on the professional competence, and academic motivation of midwifery students. The article was written in accordance with the manuscript

checklist (Booth et al., 2014).

### 2.2. Setting

The research was conducted with third grade midwifery students studying at the faculty of health sciences at a state university between March and September 2021. Since the midwifery department of the studied university is a new department, there were no senior students at the time of the research. The closest group of students to take up a position in the profession were third grade midwifery students. In addition, these students were at a disadvantage compared to freshman and sophomore students in terms of improving their clinical field practice skills. Because summer internships, which are effective in improving their knowledge and psychomotor skills, have also been interrupted due to the pandemic and it is difficult to make up for this until they graduate. Therefore, the study was conducted with third grade midwifery students.

### 2.3. Participants

The study was conducted with 20 midwifery students. In this study, maximum diversity sampling which is one of the purposive sampling methods was used. All students who met the inclusion criteria were invited to participate in the study. Those interested in the research were informed about the purpose and methods. The interviews were conducted with the participants who agreed to participate. The researchers have reached all the third-grade midwifery student participants. There was a total of 40 third grade midwifery students. Of the students, 20 refused to participate in the research. The reasons for students' refusal are the lack of time to devote and reluctance to participate. The research inclusion criteria were as follows: being a third-grade student of the midwifery department of the faculty of health sciences, not being a graduate from a health high school, and willing to participate in the research.

### 2.4. Data Collection Tools

#### 2.4.1. Introductory specifications form

Introductory features questionnaire consists of 7 questions to determine age, number of siblings, place of residence, means of accessing the distance education system, place of participation in distance education, and whether it has a room of its own during distance education and difficulty situations of students in the theoretical parts of the courses

#### 2.4.2. Structured open-ended questionnaire

The structured questionnaire was prepared based on the literature (Abbasi et al., 2020; Casafont et al; 2021; Kuliukas et al., 2021). It was consisted of 7 questions, all of which were open-ended, were asked by the researchers to evaluate the experiences of midwifery students in the distance education method during the COVID-19 pandemic process. The form was created to evaluate the effect of distance education process on educational life, the advantages and disadvantages of distance education, the effect of distance education on clinical learning skills and critical thinking skills, and the effect on learning motivation and academic achievement.

## 2.5. Data Collection

Data were collected through a quasi-structured interview guide with a pilot application (Table 1). Since the distance education experience is an individual experience for midwifery students, an in-depth interview method was preferred for collecting separate, multiple, and detailed data. By obtaining permission from the dean's office of the faculty, preliminary information about the research was sent to the students' e-mail addresses taken from the student information system. Those students who volunteered to participate in the study responded positively to the e-mails. After obtaining their consent, a mutually appropriate time and place for meeting with volunteer students were decided. The interviews were conducted through webinars and the interviews were recorded. The interviews were held in a relaxed and calm environment where both researchers were present. The interviews were conducted with no more than two students in one day and the interview records were transcribed on the same day. Each interview lasted about 40 minutes. The interviews were terminated after achieving data saturation, which yields no new data or code (Fusch and Ness, 2015).

**Table 1.** The interview guides

1. Considering your face-to-face education and distance education process, what are the positive and negative sides of distance education?
2. Do you think that the theoretical education given during distance education increases your professional knowledge?
3. Do you think that the training provided during distance education improves your profession-specific skills compared to face-to-face education?
  - Ability to independently perform midwifery interventions and practices that will meet the needs of the patient
  - In terms of being able to apply the rationales and principles of medical treatment
  - In terms of coordinating care
  - In terms of multidisciplinary teamwork
4. Considering your face-to-face education and distance education process, how did this process affect your critical thinking skills and your clinical decision-making ability?
5. Has distance education changed your motivation for learning?
6. Did the distance learning of the courses lead to a change in your interest in the courses?
7. How have the online exams affected your academic success?

## 2.6. Statistical Analysis

Four steps of qualitative systematic text condensation comprise the researchers' method for conducting a systematic examination of the data (Malterud, 2016). First, each recorded interview was transcribed

separately. Then, transcripts were read and studied several times. Then, each researcher independently analyzed each transcript to ensure reliability. The themes that group similar ideas were identified and respective codes were created. These codes were listed and grouped under the themes. In the study, the credibility method was used to ensure internal validity. The criteria of "long-term interaction" and "participant confirmation" were met within the scope of the credibility of the study. In-depth interviews were preferred for long-term interaction, and an average of 40 minutes of interviews was conducted with each participant. Immediately after the data collection, the researcher summarized the data collected to the five participants and asked the participants to express their opinions about their accuracy for participant confirmation, and it was confirmed that data reflect the opinions. To ensure external validity, the purposive sampling method was used in the study. To ensure the consistency of the research, the same interview form and the same webinar program were used during the interviews, and the same researchers participated in each interview.

The data collection tools used in the research, the raw data of the research, the encodings made at the analysis stage, and all other materials are stored for verifiability.

## 3. Results

### 3.1. Introductory Specifications

The average age of the participants was 22.56, the average number of siblings was 1.6, 70% was living in the city center, 80% was attending the courses at home, 85% was attending the courses via a computer, and 60% had their own study room. Most of the students (90%) participating in our study were found to have trouble in the theoretical parts of the courses.

### 3.2. Findings Regarding Student's Distance Education Experiences

Six themes were formed on the student's distance education experiences: (1) 'a new learning experience, (2) reluctance to learn new information, (3) inadequacy in professional skills, (4) lack of self-confidence, (5) not being able to join a multidisciplinary team, (6) anxiety about future professional life'.

Theme 1: A new learning experience

The participants stated that distance education negatively affects their personal lives and their adaptation to new learning methodologies.

*"I'm a visual learner, for example. I cannot learn due to the inappropriate materials used in online education." (P-10).*

*"Although I try to follow the courses on time, I have a hard time following the courses since the website of the distance education center does not refresh automatically and freezes." (P-1).*

*"When all students enter the system at the same time, the system collapses and we cannot log in the system, and then we are trying to connect again. It's not like face-to-face education..." (P-7).*

*"The second major problem was that most of our*

*instructors had no experience teaching online. It was a waste of time every day due to technical problems." (P-5).*

At the socioeconomic level, some students have stated that staying at home and studying at home have various benefits, such as spending more time with their families, saving money spent on transportation, and other expenses they spend.

*"Staying at home has saved me time and energy. I was losing too much time in traffic and on campus. Now I have more time and energy to spend on studying." (P-1).*

*"I was struggling financially when I was at school. Now I'm saving both money and time..." (P-15).*

Some of the participants stated that the opportunity to watch and listen to the lessons again and again with distance education has a positive effect on the learning process.

*"I like this system. I get more information. I have the opportunity to watch the videos again and again." (P-6).*

*"Although this sudden change in the teaching method is unexpected and unusual with all its difficulties, it also has advantages such as listening to the lectures at any time, and being able to repeat it as many times as we want..." (P-12).*

Some participants have noted that sitting in front of the screen for a long time negatively affects their learning process.

*"We look at the screen too much all day. My eyes cannot focus on the presentations. We are getting more tired than face-to-face education." (P-7).*

Some of the participants stated that the distance education system does not allow them to communicate fluently and verbally with teachers and peers.

*"In my opinion, non-verbal communication such as eye contact with the instructor is essential for an effective learning process. I feel its absence a lot in online education." (P-9).*

*"I miss the in-school group discussions. Now, even if the instructor asks a question, we are wasting time when the respondent turns on the microphone and says he/she didn't hear anything..." (P-14).*

Theme 2: Reluctance to learn new information

Some of the participants stated that they were evaluated on assignments and online exams during the COVID-19 pandemic, and during this process, the instructors were not fair, there was no fair assessment, so their interest, and desire to learn reduced.

*"Although I attend my classes on time, I get the same grades as people who have never attended the classes. And then I don't feel like working anymore..." (P-17).*

*"Everyone uploaded identical assignments to the system. There was no fair evaluation system, and I didn't get the grades I deserved." (P-6).*

Some participants stated that their motivation to learn decreased due to the lack of a suitable studying environment in distance learning.

*"Most of the time I couldn't find a suitable place to take my online courses at home and I believe I couldn't learn enough about the course topics since I couldn't follow the*

*lectures regularly." (P-11).*

*"We are four siblings. We all study online. There was a crowd of people at home, I honestly couldn't understand what I was learning." (P-2).*

*"I didn't have a private space at home to attend online classes. Life was going on at home. It was hard for me to concentrate due to all the noise around." (P-20).*

Most of the participants stated that their learning processes were interrupted due to technical reasons and decreased motivations.

*"I live in the district far from the city center, and slow Internet connection was among the frequent technical problems I encountered during the entire period. I had a really hard time following the courses, which depressed me." (P-18).*

*"I was experiencing Internet outages very often during daily online classes; although the problem was not me, it affected my learning." (P-9).*

Theme 3: Feeling inadequate in professional skills

The participants stated that distance education negatively affects the development of their professional skills.

*"Although videos are used for learning technical skills in clinical courses, we cannot master these skills without hands-on training." (P-20).*

*"It is not possible to give birth by imagining. I miss being in the same environment with women, I missed the clinics..." (P-8).*

*"I feel that my professional skills are lost compared to previous years. Honestly, I'm thinking about whether I'll be able to perform blood collection or perform an injection." (P-4).*

*"I'm sure no midwife has given birth by watching videos... We are watching childbirth videos for acquiring professional skills." (P-17).*

Theme 4: Lack of self-confidence

The participants stated that distance education negatively affects their professional self-confidence.

*"The inability to practice what I have learned theoretically at the clinic negatively affects my professional self-confidence." (P-15).*

*"I was practical and had self-confidence when practicing at the clinic. We had too much of a break. I'm feeling a little insecure right now." (P-8).*

Theme 5: Inability to participate in a multidisciplinary team

The participants stated that distance education negatively affects teamwork and the development of a versatile perspective.

*"Practicing with a team was always teaching us how to handle women in all aspects." (P-12).*

*"We were observing very well how care is coordinated, and how a team works in the clinic. Now all this is over with distance learning." (P-11).*

Theme 6: Anxiety about the future professional life

The participants stated that distance education and home quarantine cause concern for their future professional lives.



*"I'm worried that I couldn't learn anything for one year and that I will graduate as a midwife who knows nothing."(P-13).*

*"How long will the process take? It's unknown. Are we going to graduate on time, it's all an unknown?" (P-18).*

*"How are we going to be a midwife in the field when our clinical skills are so low? I'm getting bored the more I think about it." (P-20).*

#### **4. Discussion**

The COVID-19 pandemic has affected all areas of life and caused significant problems in educational life by leading to a rapid transition to the distance education system all over the world and in Türkiye. In this study, it was aimed to investigate the effect of distance education provided during the COVID-19 pandemic on the professional competence and academic motivation of midwifery students. The first theme that arises in the study is the change in the learning process. Students stated that the online system negatively affects their learning processes due to its incompatibility with learning methodologies, problems caused by the online system, inexperience of the instructors with the online system, staying in front of a screen for a long time, and the system's inability to provide an environment to allow them to communicate fluently and verbally with instructors and peers. Like our study, in the studies in the literature, it has been stated that distance education has negatively affected learning of midwifery students and created difficulties during covid-19 (Kuliukas et al., 2021; Topuz et al., 2021; Rasmussen et al., 2022). In our study, despite the negative effects of online education on learning, some of the students also emphasized that distance education has positive aspects. Students have stated the advantageous aspects of saving money and time, spending more time with families, and being able to repeat the information they have learned. In a study conducted with nursing students in the literature, students stated that the distance education provided due to COVID-19 saves time and energy (Suliman et al., 2021). Armstrong-Mensah et al. (2020) in their study with university and graduate students, stated that among the positive aspects of distance education, they do not have to spend money and time to go to campus. Although the studies were conducted with different student groups, similar results were obtained. This situation is important in terms of showing that the sudden and rapid transition to online education, which started with covid 19, leads to similar results for all students.

The second theme that arises in the study is the reluctance to learn. The students stated that they were reluctant to learn due to the lack of a fair assessment system, the lack of a suitable environment for studying, and technical problems hindering the learning processes. It is believed that this is caused by the inability of students to adapt to the sudden change in the education system in Türkiye. Similarly, have stated that it was difficult to get used to the online education they received

during the COVID-19 pandemic, that they were distracted during the lectures, and their motivation decreased (Aguilera-Hermida, 2020; Armstrong-Mensah, 2020; Topuz et al., 2021). In addition, it has been noted that online education negatively affects students' learning due to insufficient online education infrastructure, lack of instructor-student communication and interaction, reduced learning motivation, and lack of an objective assessment (Radu et al., 2020; Armstrong-Mensah et al., 2020). Michel et al. (2021) stated that in the study with nursing students, online learning decreased their knowledge levels, academic averages, student-teacher interaction and increased the homework load. In their study with nursing students, students stated that online learning decreased their knowledge levels, academic averages, student-teacher interaction and increased the homework load. The results of the study showed similar negative results on the learning assessment and interaction of online education.

In the study, the third theme is feeling inadequate in professional skills and the fourth theme is lack of self-confidence. Midwifery education consists of theoretical and practical sections that complement each other. Clinical training allows integrating theoretical knowledge and practice, allowing students to learn by doing and experiencing in a real environment. Together with online education, students have completed their clinical training in the form of case discussion, watching videos, and seminars. This also negatively affected the development of students' psychomotor skills in a clinical setting. In the literature, it was stated that online education is not effective in acquiring clinical and technical skills (Abbasi et al., 2020; Luyben et al., 2020; Kuliukas et al., 2021;), and it was also noted that online education negatively affects students' self-confidence and their preparation for the profession (Choi et al., 2020; Topuz et al., 2021; Kabir et al., 2022). The results of the study showed that, similar to our study, online education is not sufficient to develop clinical skills, professionalism and self-confidence.

One of the main conditions for providing qualified medical care is that team member's work in a team spirit using their communication skills in close cooperation with each other. The fifth theme in the study is the inability to join a multidisciplinary team. The students stated that distance education disrupted teamwork, they miss being a member of a team, and cannot evaluate female patients holistically. With the pandemic, students have been away from clinical learning environments and have been deprived of the opportunity to work with the patient with a holistic approach and other team cooperation. Studies have reported that shortening the duration of clinical practice from previously planned in medical education leads to a gradual decrease in the clinical competence of students and their ability to develop relationships with patients, staff, and clinical staff (Sani et al., 2020; Theoret and Ming, 2020). Although the sample group is different, the results in which team communication and teamwork are negatively

affected are similar in the departments where clinical education is integrated with theoretical education.

The sixth theme that arises in the study is the concern about future professional life. Students, who have experienced unprecedented "home quarantine" experience during the COVID-19 pandemic, have stated that they are worried that they will not be good midwives due to both being away from the clinic and due to the uncertainty of the pandemic. The thought that there is no time to gain professional competence and experience may influence this result in midwifery students, who are the closest group to start a professional life. This is due to the fact that students who are away from clinical learning environments due to the pandemic do not have enough time to develop their clinical skills as their grades increase. In one study, it was found that the pandemic process causes professional anxiety in nursing students (Ramos et al., 2020). In addition, in the previous studies, it was found that professional anxiety also increases as the students' year in school increases (Ceviz et al., 2020; Wang and Zhao, 2020).

### 5. Conclusion

Distance education affect midwifery student's perspective on professional competence and academic motivation. It was stated that most of the students were not satisfied with distance education, they could not practice in clinics, the quality and efficiency of the education decreased, and all of these caused negative feelings about their professional competence and academic motivation. These findings underscore the importance of assessing temporal changes in midwifery education and providing effective programs that enhance their professional competence and academic motivation.

### Author Contributions

Concept: S.S.Ç. (50%) and D.G. (50%), Design: S.S.Ç. (50%) and D.G. (50%), Supervision: S.S.Ç. (50%) and D.G. (50%), Data collection and/or processing: S.S.Ç. (50%) and D.G. (50%), Data analysis and/or interpretation: S.S.Ç. (50%) and D.G. (50%), Literature search: S.S.Ç. (50%) and D.G. (50%), Writing: S.S.Ç. (50%) and D.G. (50%), Critical review: S.S.Ç. (50%) and D.G. (50%), Submission and revision S.S.Ç. (50%) and D.G. (50%). All authors reviewed and approved final version of the manuscript.

### Conflict of Interest

The authors declared that there is no conflict of interest.

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### Ethical Approval/Informed Consent

This study was carried out in accordance with the

principles of the Declaration of Helsinki. The study procedures were approved by the Engineering and Health Sciences Scientific Research and Publication Ethics Committee of Kastamonu University (no: 2020 3/2, Date: 03.10.2021). Prior to inclusion in the study, oral and written informed consent was obtained from each participant and their anonymity was ensured.

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