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Impact of COVID-19 Pandemic on Nursing Education and Way Forward

Filiz Ogce Aktas^{1*}, Tülay Yavan¹, Suresh Kumar Sharma²

¹Department of Nursing, Faculty of Health Science, Izmir University of Economics, Izmir, Turkey, ²College of Nursing, All India Institute of Medical Sciences, Jodhpur, Rajasthan, India

INTRODUCTION

COVID-19 spread rapidly from Wuhan, China, in 2019, leading to an ongoing coronavirus pandemic. The COVID-19 pandemic has profoundly affected social-cultural and economic life as well as health all over the world, and has created many unforeseen difficulties. Consequently, it has become necessary to make wide-ranging changes to overcome the obstacles created by the pandemic. In the face of urgent needs for change, quick and decisive action was imperative, and the realisation of this change has brought some excitement but also much discomfort.

In Turkey, schools were closed across the country as part coronavirus prevention measures after the announcement of the first case on 11 March 2020. The Higher Education Council announced that, as of 23 March, education will continue online in all universities.^[1]

Thus, one of the most important changes caused by the pandemic took place in the field of education. All over the world, education is being supported by online technologies, never utilised before as teaching methodology to such a great extent.

ONLINE EDUCATION

E-learning includes all learning activities, resource access, communication and evaluation performed in an online environment using a range of information and communication technologies accessible through computer or mobile devices. In this process, which started with little preparation, all institutions had to rapidly decide how to manage the remaining programme. Institutions with an established online infrastructure continued with relatively little difficulty, unlike those universities without a ready infrastructure. This decision also significantly affected the training of health

professions, such as nursing, whose education is mostly practice based.

Courses have begun to move rapidly from campus-based education platforms to remote learning. In the transition to online learning, faculty members accustomed to teaching face-to-face could feel disconnected from their students, while those accustomed to teaching online felt a need to further develop their connections with students during the pandemic.^[2,3] The most challenging part of online learning is the need for faculty members to create online materials to capture students' attention and interest and finding the time and knowledge to devote to this.^[4]

Online teaching requires more time than face-to-face training, and the workload of faculty staff has increased. Thus, in online education, it would be important to consider the old adage 'work smarter, not harder'.

In addition to knowing how much time lecturers spend on their online teaching, institutions should guide faculty members on how they can maximise their impact on student learning.^[5] Boettcher and Conrad^[6] stated that an average of 18 h is required to create an hour of web training; however, Van de Vord and Pogue argued that the time needed may vary according to the experience level of the teacher, as well as course level and class size. In their study, they stated that novice instructors could spend an average of 17.08 h per course, experienced instructors, 13.39 h, and very experienced instructors, 11.25 h. They indicated that time requirements were valid for courses with 30 and fewer students, and additional time would be required for the preparation of courses with 40 or more.^[4,5,7]

Address for correspondence: Prof. Filiz Ogce Aktas, Department of Nursing, Faculty of Health Science, Izmir University of Economics, Izmir, Turkey.
E-mail: filizogce@gmail.com

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NURSING EDUCATION DURING PANDEMIC

Patient care, which is a central concept in nursing education, has been affected due to basic measures required in the pandemic, such as the mask, social distancing and hand hygiene.^[8] We are faced with a dilemma about how to continue nursing education with strict quarantine measures in this period, when nurses are needed at the frontline. All academicians agree that while most courses in nursing education can be conducted online, students must complete their practical training in the laboratory or clinic. However, with pandemic measures, many issues have been discussed during online meetings and conference amongst deans of universities, the Turkish Nurses Association and the Nursing Education Association. As a result, many universities made the difficult decision to remove students from clinical practices. During this process, the most important issues were how to evaluate students fairly and how to conduct practical lessons.^[9] While many students expressed concern over the effect of this significant interruption in their nursing education on their future careers,^[10] many instructors and managers were particularly worried about students graduating in 2020 and 2021.

In virtual health education, as far as possible, new methodologies for teaching/learning are needed to build knowledge, as well as new definitions of the role of the teachers, and their interactions with students. In the remote learning process, academicians may feel disconnected from their students, and students should be encouraged to further develop their connections to avoid this undesirable outcome. A discussion board forum or video communication can be included to connect with students. There are many web-based or smartphone-based applications to create the videos can be found. Online learning research shows that student learning and satisfaction are correlated with the participation of academics who work to establish a presence through posts on the discussion forum.^[8] The use of tools and materials in online education can have many benefits, such as increasing students' attention and interest, relieving teaching from monotony and excessive time and words and maintaining active participation. Since audiovisual tools appeal to different sensory organs, they facilitate perception and learning, increase efficiency and improve the relationship between educator and students.^[2]

In nursing education, to achieve an increase in productivity and a sustainable learning, updates are required on many issues, including creation and management of knowledge, individualised learning environments, continuous access to resources, low-cost learning materials, freedom to make mistakes, synchronous and asynchronous access and permanence of learning. For example, freedom to make mistakes can be provided by augmented reality and virtual reality-based medical applications, with realistic learning environments where they can experience real-life situations.^[9]

Distance education should be supported by well-structured interactive programmes; for this purpose, courses can be started with activities that require interaction of students, and

regular synchronous meetings can be planned. Another key area in distance education is pedagogy. The syllabus of the programme, learning objectives and outcomes and learning methods should be explained to the students in short videos, and these objectives and outcomes should be agreed upon in advance. Technology is indispensable in delivering distance education to students, and universities compete to offer the latest infrastructure, hardware and software, archiving and storage.

The most crucial and most contemplated aspect of online learning is evaluation; the greatest challenge is to make students adopt ethical values, preventing cheating and assessing them objectively. Feedback is important in the evaluation, and teachers can use a range of project-based studies, case studies and presentations, daily and weekly periodic assignments, developing presentation and speaking skills, examinations with multiple-choice and open-ended questions, problem-solving-based evaluations and webinars.^[9]

NEW NORMAL

A globally effective pandemic can be regarded as a disaster by its nature and can be interpreted as a sign of a new beginning, as well as the end for old ways of doing things.^[2,10] With this viewpoint, it is possible to say that after the dramatic experience of COVID-19, a new normal and new world order will be created. The COVID-19 pandemic has changed our perspective on education and the way we interpret it.

All educational institutions have had to change the traditional classroom and old learning methods to provide uninterrupted access to knowledge at a distance. The role of the educator has evolved, as learning shifted from enclosed classrooms to the more personal space of online education. As learning became more individual, educators had to develop innovative teaching methodologies to suit the needs of students. Educators needed to acquire new skills or strengthen their existing knowledge to become an online instructor and mentor in these challenging times. With all these in mind, it is important to address the following key issues:

1. Theoretical knowledge is the basis of all skills and must be supported by extensive practical learning. Much in nursing education can only be learned through practice and experience. By studying real hospital cases, students can gain not only hands-on experience but also understanding of problem-solving ability, cooperation and the importance of teamwork. Thus, both academicians and students must be supported in face-to-face training as well as in online training and education
2. Universities should make plans in collaboration with hospitals and local governments, based on the new normal during the pandemic lockdown and opening periods
3. Digitalisation, an integral part of the new normal, also requires security, protection of personal data and the determination of ethical rules.

EXAMPLES OF NURSING EDUCATION DURING PANDEMIC

As İzmir University of Economics, Faculty of Health Sciences, Department of Nursing, we have organised a webinar series on 'Nursing Education in the World during the COVID-19 Pandemic' as of January 2021. In making these webinars, we included academicians and nursing students talking about their experiences of the pandemic from different countries, including the USA (in January), Australia (in February), India (in March), Germany (in April) and Turkey (in April). According to these experiences, in nursing education, where more than half of the programme is based on practice, theoretical courses are usually conducted in a remote synchronous/asynchronous manner, and special precautions are taken in practical courses carried out in laboratories and clinics. During periods of high incidence, it became difficult for students to practice in laboratories and clinics, and this was even prohibited in some regions/countries.

In general, during face-to-face courses/laboratory/clinical practices, the following measures were taken, such as providing training about COVID-19, determining to rules to be followed, the use of personal protective equipment, having more practice groups with fewer students in each, determining the filiation teams and flow charts and avoiding participation in the care of the patient diagnosed with COVID-19. If the laboratory/clinical practices were not possible face to face, distance education methods were used, such as videos for nursing skills, case studies, nursing care plans and presentations.

It has also been observed that practices differ according to the countries. The academician and nursing student participating in our webinar from the USA explained that nursing students were involved in the COVID-19 testing conducted at the entrance of the universities. The academician from Australia reported that the Australian Nursing and Midwifery Accreditation Council (ANMAC) and Nursing and Midwifery Board (NMBA) do not allow students to graduate without completing their clinical practice. The academician from Germany expressed that a new nursing education system was started in Germany in January 2020. However, due to the pandemic, hospitals in their own state did not accept nursing students, and students could not perform clinical practice. Therefore, they will have difficulties in evaluating the new education system in the future. The academicians from Turkey explained that priority has been given to COVID-19 vaccination for senior nursing students about to begin clinical practice in Turkey. Similarly, the academician from India stated that all nursing students in India must be also vaccinated.

All academicians and students pointed out that their workload had increased, and that various measures have been taken to ensure academic honesty in online theoretical courses, examinations, homework and projects. Significant problems in these trainings were reported by students with a lack of Internet and computers and educational institutions with inadequate distance education infrastructure.

All the students who participated in the webinars stated that, although they experienced COVID-related fear and anxiety

during their clinical practice, these clinical experiences were uniquely valuable, and they would make significant contributions to their profession after graduation. Academicians emphasised the importance of producing nurses qualified in the area of public health, even under difficult conditions during the pandemic period. Despite all these difficulties experienced during the pandemic period, our hope for the future has been increased by these academicians' and students' high level of effort, willingness and perseverance in carrying out nursing education to the best of their ability.

CONCLUSION

All over the world, educational decision-making is undergoing a process of constant change, and unfortunately, and in the absence of obvious solutions, we need to work more intensively on urgent safety concerns regarding future clinical training.

Negative emotions such as anxiety and stress experienced during the pandemic process can prevent the active participation of students in courses. Therefore, instructors, educators or mentors must build a bridge between students' concerns and the unpredictable future, as well as the challenges of the new normal.

Nursing education in Turkey at the undergraduate level lasts for 4 years, and in the first 2 years, the courses and practices can be provided by well-structured distance learning. It is important that both students and educators are supported by their institutions in structuring remote learning. However, it is important that senior year internships should be done face-to-face at the clinical level.

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Conflicts of interest

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