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# Distance education in the field of obstetrics, gynaecology, and ultrasound diagnostics in the conditions of quarantine restrictions and hostilities: A literature review

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**Abstract.** Forced distancing in the context of the COVID-19 pandemic has necessitated the transition of medical education to distance learning. The problem was exacerbated by the outbreak of full-scale hostilities, which necessitated further research in this area. The purpose of the study was to comprehensively review current scientific materials and consolidate existing knowledge on educational activities in obstetrics, gynaecology, and ultrasound diagnostics in the context of the coronavirus pandemic and full-scale hostilities. The following methods were used for the study: bibliographic, analysis, synthesis, induction, generalization, analogy, systematization, and categorization. The article presents a comprehensive analysis of the current literature on overcoming pedagogical challenges in the context of the COVID-19 pandemic and military operations through the achievements of distance education. The methodological foundations of distance education, the peculiarities of applying this practice in a pandemic and military operations, the similarities, and differences between them, especially in the context of obstetrics, gynaecology and ultrasound diagnostics, are considered. The connection between telemedicine and distance learning is presented both at the level of theory and practice. The practice of distance learning in obstetrics and gynaecology is compared with some other clinical disciplines. The result of the study was to solve the problem of the lack of a systematic view of the adaptation of the educational process to the conditions of a pandemic and military operations as emergency distance learning, rather than the classical practice of distance education, which contributes to the formation of an adequate assessment of pedagogical activities conducted in such conditions, in particular, in the field of obstetrics, gynaecology, and ultrasound diagnostics. The results of the study are of practical importance in the field of medical education,

where they can be used to develop recommendations for the organization of training in obstetrics and gynaecology or other medical disciplines in conditions of forced distance learning

**Keywords:** educational activities; information technology; telemedicine; digitalization; simulation medicine

## INTRODUCTION

Since 2020, the education system has continued to face significant obstacles. The COVID-19 pandemic has become a significant challenge for both the global healthcare system and other sectors, including the education system. The medical education sector, which is at the intersection of these two areas, has faced particular difficulties. The biggest crisis was experienced by such a practically oriented discipline as obstetrics and gynaecology, for which, under quarantine restrictions, the main obstacle was distancing from healthcare facilities; similar challenges were faced in the field of ultrasound diagnostics. The end of the COVID-19 pandemic coincided with the start of large-scale military operations in Ukraine, which increased the burden on both the educational and medical sectors. The need to conduct the educational process in extreme conditions has exacerbated the problems that arose during the pandemic and has made it more urgent to find ways to optimize educational activities in the current situation. Therefore, the study covers a wide range of issues related to conditions that are restrictive to the educational process, such as the availability of educational information, the safety of the educational environment and its comfort, and the integration of modern practices under stressful conditions. Similar issues have already attracted the attention of Ukrainian scholars in the past. A. Prokopenko & S. Dotsenko (2021) emphasized in their study that the digitalization of educational systems and ensuring the ability of both teaching staff and students to study remotely is the most optimal solution to the problem of providing educational services in the context of the coronavirus pandemic. From the point of view of foreign colleagues, the problem was considered by N. Aristova & O. Malykhin (2021). Based on the experience of the Benelux countries, it was concluded that practices such as placing digital materials on resource platforms, transforming media resources into full-fledged educational portals, using existing applications for educational purposes, and developing new applications can have a positive impact on the educational process. These scientific works were focused on the study of ways to use information systems in the context of a wide range of educational programmes, which is why insufficient attention was paid to the clinical disciplines themselves and methods of their adaptation to the new pedagogical reality.

In their study, O. Lasytchuk *et al.* (2021) considered the issue of teaching such a clinical discipline as obstetrics and gynaecology. Taking into account the forced distance from medical hospitals, it was decided to increase the time for independent work of students and conduct distance learning in synchronous mode, compensating for the lack of clinical practice with case studies. Recommendations for the digitalization of the educational process in a pandemic were also proposed by Yu. Donska & N. Simonova (2021) based on their practical experience. It was emphasized that applications and platforms such as GOOGLE Meet, Caroline, ZOOM, Edmondo, TEAMS, Fliogrid and Skype are optimal for use in teaching obstetrics and gynaecology. The presented materials provide in-depth information on the peculiarities of teaching obstetrics and gynaecology in a pandemic. However, the problems that arise under martial law and ways to solve them have not received sufficient attention. In their work, H. Ridkodubska *et al.* (2022) studied the educational process in the context of hostilities and concluded that the use of information technology helps to ensure the continuity of the educational process, reduce stress, and prevent social maladjustment. An important problem in this context, given the unpredictability of the situation, is the issue of access to these resources for students and their social and living conditions. In their material, A. Sibruk *et al.* (2023) emphasized the importance of maintaining students' motivation, and the authors also expressed concern about the lack of qualified professionals who can work in such conditions.

In the course of the work, a comprehensive search of scientific literature on pedagogical, scientific, and practical, medical, and social resources was conducted using the bibliographic method to form a comprehensive basis for the study: ERIC, Education Research Complete, ProQuest Dissertations & Theses Global, Web of Science, Science Direct and PubMed. Using a number of keywords and phrases, such as: distance education; obstetrics; gynaecology; ultrasound diagnostics; quarantine restrictions; military operations; online learning; medical education; COVID-19; telemedicine; medical education; distance learning – a search for information on the problems related to the problem of the educational process in the field of obstetrics, gynaecology, and ultrasound diagnostics under the restrictive conditions of the COVID-19 pandemic and military operations, both in Ukraine and other countries, was carried out. Given that the problem is quite new, the criterion for the literature search was the time limit of 2019-2023, although some materials were included in the study as an exception. The above allowed coming closer to the most modern idea of conducting a distance learning process, touching on such clinical disciplines as obstetrics, gynaecology and ultrasound diagnostics, in the limited and unpredictable conditions of a pandemic and large-scale hostilities. Given

the significant medical and social significance of the problems, the purpose of this study was to consolidate existing knowledge through a comprehensive review of current literature on current practices in teaching obstetrics, gynaecology, and ultrasound diagnostics in the context of the COVID-19 pandemic and full-scale military invasion. This will further enable the creation of optimal educational programmes, both in normal and extreme conditions, not only for this, but also for other medical and social disciplines.

## TRANSFORMATION OF MEDICAL EDUCATION IN THE CONDITIONS OF THE COVID-19 PANDEMIC

The COVID-19 pandemic has become a global shock that has affected all spheres of life: politics, economics, healthcare, education, and others. The changes caused by this event have affected various groups of people, including university professors, students, and their parents. The healthcare sector was particularly stressed at both the global and local levels, which led to a number of significant changes in the provision of medical care. The increased burden on all levels of healthcare, from outpatient to highly specialized inpatient departments, has led to an increased risk of COVID-19 infection and necessitated the need to distance healthcare institutions, including from medical students (Markwei & Goje, 2021). This has been especially true in the context of medical education, particularly in clinical disciplines such as obstetrics and gynaecology, as training in such a highly practical field has never been conducted under such restrictions before (Cisar & Matalega, 2020). Prior to the pandemic, the national curriculum for medical students included three types of activities: practical classes, seminars, and lectures (Shchurko, 2022). The quarantine conditions on the part of healthcare facilities and the need to limit contact between students, teaching staff and practitioners made it impossible to conduct the first type of activity, and subsequent changes on the part of medical education institutions significantly changed the latter (Shevchuk *et al.*, 2020). The above has led to two main trends in medical education during and likely after the COVID-19 pandemic: the transformation of traditional educational practices that have been established for many years and the emergency transition to distance learning. Both educational institutions and students were not ready for the former and the latter, which significantly complicated the implementation of new educational practices (Gromova *et al.*, 2020). Representatives of educational institutions faced methodological problems in the form of the need to reformat the old curriculum in accordance with the realities of emergency distance education, and the lack of guiding models that would provide for such changes. Students were more likely to have social and psychological problems, in particular, motivation. For both interest groups, the mismatch of material and technical capabilities with the larger demands that arose in connection with the realities of distance education was also a problem, which deepened the phenomena of social and material inequality (Polyanskaya *et al.,* 2021; Haelermans *et al.*, 2022).

According to the United States Distance Learning Association (USDLA), distance education is a way of acquiring certain knowledge and skills through the use of information transfer. In this case, the definitions of distance education and distance learning can be identified. According to W. Holmberg (1977), it is a complex term that covers not only different methods but also levels of education. The main feature of distance learning is the absence of constant control and physical interaction, both on the part of the teacher and the subject of study. Distance education involves interaction between the teacher and the student outside the educational institution through the use of electronic media and other technical means. From the methodological point of view, distance education is classical when the learning materials are originally developed for this format and do not require additional adaptation. The classification of distance learning is presented in Table 1.

**Table 1.** Classification of the classic form of distance learning

| Characteristic | Type of distance education |
|---|---|
| For continuity of communication | Synchronous: the contact is continuous by the type of video conference or audio communication |
| | Asynchronous: contact is made via video, audio or written messages |
| According to the form of education | Face-to-face: involves the direct participation of the student in the educational process; this term is used in the context of emergency distance education |
| | Correspondence: a classic option for distance learning, which involves the student's partial participation in the educational process, since a certain part of the material is given to self-study |
| By character | Individual: focused on an individual student of education |
| | Group: aimed at a small group of acquirers |
| | Mass: covers numerous learners nationwide, mainly used in the context of open online lectures. |

**Source:** compiled by the authors of this study

In the context of medical education, classical distance learning is used only in the training of pharmaceutical specialists. The forced transition from classical to distance learning in the context of the COVID-19 pandemic should be considered as emergency distance learning, i.e. a temporary transformation of educational practice into an alternative mode due to emergency circumstances (Bernard *et al.*, 2009). It is especially important that this type of distance

education uses learning materials that were to be studied in the classroom. In this case, the main goal of implementing new learning practices was to provide fast and reliable temporary access to education in a crisis (Lockee *et al.*, 2001). Before the pandemic, this type of distance learning was mainly used in regions where military operations were taking place (Davies & Bentrovato, 2011; Hodges *et al.*, 2020). However, during the pandemic, it has become a widespread practice. The distinction between distance education and emergency distance education is strictly methodological, although it is important when comparing different practices. Since the learning materials in emergency distance learning are not adapted, this negatively affects learning outcomes, unlike the classical form of distance education, when the format of materials originally created for such conditions allows maintaining the learning process at the desired level.

## EMERGENCY DISTANCE LEARNING IN THE FIELDS OF OBSTETRICS, GYNAECOLOGY, AND ULTRASOUND DIAGNOSTICS

Open distance learning is a form of distance education in which learning resources and materials are openly available to anyone without restrictions. It is implemented mainly in such forms as online courses, webinars, and forums. The main characteristics are greater cost-effectiveness, wide accessibility, high individualization, and flexibility than for other types of distance education (Ag-Ahmad, 2020). Thus, when discussing the topic of distance education in the medical field, in particular, in the field of obstetrics, gynaecology and ultrasound diagnostics, the default is emergency distance learning. This creates certain difficulties in assessing the effectiveness of the work done, as the comparison of results is sometimes made taking into account classical methods of distance education, when the teaching materials were specially developed for this learning format. To ensure the safe training of medical students in obstetrics, gynaecology, and ultrasound diagnostics in the context of the COVID-19 pandemic, measures were taken at the initial stages to limit contact with patients. Later, given the evolution of quarantine restrictions, distancing with medical staff also took place, and eventually, the management of healthcare institutions decided to restrict access to hospitals for students. This necessitated the development of alternative learning practices to enable students to continue learning the necessary knowledge and skills (Lassoued *et al.*, 2020; Budiman, 2021). Although obstetrics and gynaecology is a clinical discipline, the use of information resources in both the educational process and clinical practice was not fundamentally new (Ten Cate & Durning, 2007). However, the transition to distance learning in the context of the pandemic was a challenge, and not all educational institutions were prepared to adapt educational materials to the new conditions. The main goal of emergency distance learning was to provide opportunities for virtual continuous learning, a flexible system of support for learning activities that meets institutional and national standards (Patil & Yan, 2023).

The vast majority of programmes were delivered in the form of synchronous group distance learning using video conferencing applications: GOOGLE Meet, ZOOM, TEAMS, and Skype (Syusyuka *et al.*, 2016). In the case of teaching ultrasound diagnostics to medical students, an application such as Ecofisio is recommended (Lozano-Lozano *et al.*, 2020). The time allocated for student's independent work was increased. In order to optimize learning platforms, existing digital resources were also modernized, and new ones were developed. Given the impossibility of conducting practical classes in the usual sense, considerable attention in the educational process was paid to the Virtual Patient programme, a computer simulation model created to simulate clinical cases, patients, and situations (Pakharenko, 2018). The programme provided an opportunity to gain a realistic, interactive, and most importantly, safe experience away from the medical hospital (Chang *et al.*, 2020). Also, a significant part of the learning process was devoted to solving case studies, which also allowed simulating clinical experience (Quintiliani *et al.,* 2022). Regarding distance education in the field of ultrasound diagnostics itself, which is related to both obstetrics and gynaecology and other areas such as cardiology and others, it is worth mentioning tele-ultrasound diagnostics (tele-USD) courses (Drake *et al.*, 2021). According to the feedback from teachers and students, the tele-ultrasound course was effective for learning practical skills, but teachers noted that virtual lectures were less effective than classroom classes. Teachers also expressed dissatisfaction with the difficulties associated with concentrating students' attention on the learning process, troubleshooting problems with the image, and providing feedback to participants in the educational process. The students rated the practice of tele-education higher than classroom classes, while the teachers had the opposite opinion. It should also be noted that in the case of distance learning, the results of the final tests were better than those obtained during classroom training (Soni *et al.*, 2021).

In a distance learning programme, about 88% of learners reported feeling more comfortable answering questions via video conference than in person (Pelikan *et al.*, 2021). This practice has the potential to overcome the limitations of physical space and fear of public speaking. However, the long duration of distance learning, in the absence of any timeframe for completion, has had a negative impact on the mental health of students, so it is also important to integrate mental health programmes into the learning process (Donska & Simonova, 2021). Much of the educational materials adapted for emergency distance learning or directly created for it can be further used in the classical educational process, for example, in the form of stations for the objective structured clinical examination (OSCE) (Krychkivska *et al.*, 2022). However, the issue of a full return to the old educational standards requires further discussion.

The outbreak of large-scale hostilities coincided with the easing of quarantine restrictions in Ukraine. This meant that the use of digital technologies and information systems in curricula that had been adapted for the pandemic

period became even more important in the more extreme conditions of military conflict (Lysenko *et al.*, 2023). From the perspective of medical education, the factor that led to the transition to distance learning was common in both cases – the need to avoid physical contact with medical facilities and educational institutions (Vyhivska *et al.*, 2023). However, the conditions of the military conflict have exacerbated some of the problems that were less visible during distance learning in a pandemic. These include social and material inequality, demands on living conditions, and psychological stress, which have become more acute in the context of hostilities (Miroshnichenko & Goldovskiy, 2022; Nitsovych & Semeniak, 2023). A significant number of students and teachers have been and continue to be in dangerous areas, such as war zones or temporarily occupied territories. This has resulted in a lack of access to the Internet and technical facilities, which hinders participation in distance learning. The need to evacuate due to frequent air raids in most of Ukraine has also had a negative impact on the quality of distance learning. This situation has a direct impact on the organization of the learning process and can lead to its disruption (Xie *et al.*, 2020).

Therefore, due to the uneven access of the participants of the educational process to synchronous distance learning, it is recommended to switch to asynchronous distance learning. Given the complexity and practical orientation of obstetrics, gynaecology and ultrasound diagnostics, as well as the growing problems associated with stress, it is recommended to conduct short psychological trainings and review the material in compliance with the principles of professional ethics (deontology). In some regions, distance learning is becoming the only way to obtain the necessary education and psychological support. Thus, even though distance education, especially in medical fields, is not a universal solution, in some cases it can be an important means of supporting the social well-being of students. Thus, the methodological foundations for the definition and typology of distance education were considered, and the main trends in the transformation of educational practices during the pandemic and military operations were identified, in particular, through the prism of teaching obstetrics, gynaecology, and ultrasound diagnostics. The future of educational practices, both new and traditional, as well as the use of experience from other medical disciplines other than these, require further discussion. Telemedicine should also be considered as a practical extension of distance learning methods.

## TELEMEDICINE AND DISTANCE LEARNING IN THE FIELD OF REPRODUCTIVE HEALTH

As X. Xie *et al.* (2020) highlighted in their study, distance education is currently in the global spotlight and plays an important role in the context of the COVID-19 pandemic. The massive use of online resources during the pandemic is likely to change students' perceptions of distance learning and promote its wider use in the post-pandemic world. The authors emphasize that distance education is becoming an integral part of general educational practice, and it can successfully coexist and be combined with traditional classroom methods of teaching. In his study, A. Mitchell (2023) concluded that technology will play a key role in the future of education. Educational technology has long been an important area of investment, and the online education market is set to grow even larger in the coming years. The introduction of the fifth generation of mobile networks (5G) is opening up new opportunities for mobile learning, which could become the main channel for distance education in the future. More and more hardware and software are emerging to enable device-to-device interaction in classrooms, allowing students to learn and join online classes at any time using their smartphones, tablets, and other portable devices. A high-speed mobile network provides efficient, real-time data transmission, including high-quality audio and video, which enables high-quality online interactions. Mobile learning provides additional flexibility and convenience, allowing students to use their time, for example, on the road, in queues and in other spare moments to study.

In their work, G. Dick *et al.* (2020) noted that higher education institutions are introducing innovative online learning methods in the classroom as well, using advanced technologies such as artificial intelligence, augmented and virtual reality. The use of artificial intelligence covers various aspects of education, including automatic work verification and monitoring of the testing process. Virtual reality allows students to immerse themselves in learning material as if they were there in person. They can visit any place on Earth, get to know different cultures and historical periods, and even feel like a participant in events. Augmented reality allows learners to better understand educational material by enabling them to see it in a real environment. Students can explore complex concepts, conduct experiments, and even create their own virtual models. Large technology companies and course developers will continue to invest in the development of advanced applications based on virtual reality (VR), augmented reality (AR) and artificial intelligence (AI) in education. Online courses and hybrid education will become an integral part of the long-term strategy of many universities. Many students are concerned about the high cost of education, and online education has the potential to reduce education costs and attract more students, including those living in remote areas or other countries. This provides students with a wider range of choices and helps to increase accessibility, which is an important objective of public universities. The walls of universities and other educational institutions are no longer the only place to learn. Online education is being combined with traditional methods and is becoming an important part of the education of the future. Thus, the results of a number of studies presented above confirm the findings of this paper regarding the further use of distance learning practices in its classical and blended forms.

Telemedicine and distance learning are two areas of activity that emerged at the same time and have undergone

joint development and popularization. In terms of education, distance learning precedes the use of telemedicine achievements by future specialists, due to closer interaction with information and technical resources and overcoming the wariness of implementing the latest resources in medical practice. Medicine in the field of women's reproductive health has developed especially well. The study by S. Murugesu *et al.* (2020) notes that the coronavirus pandemic has provoked significant changes in the field of reproductive care. The increased burden on the healthcare system, both at the outpatient and inpatient levels, including specialized departments, has led to a decrease in the availability of routine medical services. This has directly affected the field of obstetrics and gynaecology, and to cope with this situation, it is important to adapt the provision of medical care in this area using telemedicine technologies. C.L. Ventola *et al.* (2014) note that even before the pandemic, telemedicine in the field of reproductive health had developed significantly, which led to the rapid development of the industry in proportion to consumer demand. Therefore, a number of common phone applications can be adapted to provide professional medical care in the field of obstetrics and gynaecology. Telemedicine can provide much more effective assistance in the prevention and correction of reproductive health factors for both women planning a pregnancy and their partners than traditional visits to medical facilities. Telemedicine is most effective in addressing chronic rather than acute health problems, which are a priority in preventive programmes. It also provides accurate and continuous monitoring of diseases. Modern applications automatically generate reports, which eliminates the need for the service user to provide data on their own. Such a simulation of classic visits to an obstetrician-gynaecologist has a positive impact on the results of prevention programmes.

Quite often, financial and time constraints are an obstacle to visiting a healthcare facility, and the use of online resources can help overcome such barriers. Such resources provide individualized and continuous information to the extent that it facilitates more effective disease management. Telemedicine, like distance learning, opens up new opportunities to optimize the delivery of healthcare services, particularly in the field of obstetric and gynaecological care. In the context of improving the quality of medical care, telemedicine offers a solution for overloaded healthcare delivery systems and contributes to the improvement of confidentiality in obstetrics and gynaecology. Thus, the above studies complement the material on continuity in the system of "telemedicine and distance education" and draw attention to the prospect of using telemedicine in the provision of preventive obstetric and gynaecological services. The issue of disciplines related to obstetrics, gynaecology, and ultrasound diagnostics has also attracted the attention of scientists, for example, V. Mehta *et al.* (2021) investigated the prospects of distance education in the most practical medical field – surgery. They used both conventional online resources and more complex virtual patient programmes, including online broadcasting of surgical interventions, which had a positive impact on the clinical experience gained by students. The prospects of a mixed type of distance education in the context of surgery are also emphasized, as greater experience with information technology resources is positively correlated with the quality of the use of telemedicine tools, which are developing rapidly in this area.

Authors A.J. Machado Júnior & H.F. Pauna (2020) examined distance education through the prism of otolaryngology in their study and came to the following conclusions: a wide range of resources for distance education in the field of otolaryngology, including applications with 3D models of anatomical structures, effectively complement classical teaching methods. Virtual consultation, both in terms of its high importance and prevalence, should be equated with distance learning, with an indication of the appropriate continuity between the way of acquiring knowledge and its use in practice. The researchers also emphasize the importance of considering individual differences among students, as their preferences and skills in using technology can vary considerably. Thus, these studies complement this article in relation to distance education in the context of other medical disciplines, ultimately confirming the prospect of further application of this practice both independently and as a supplement to classical methods.

## CONCLUSIONS

The scientific material presents a comprehensive literature review on the topic of distance learning in the field of medical education, especially obstetrics, gynaecology, and ultrasound diagnostics. The COVID-19 pandemic has significantly changed the paradigm of medical education, prompting the rapid development of distance technologies. The transition to urgent distance learning was a major challenge for the education system. Mainly, the accelerated transformation of the educational process was caused by the need to distance students from healthcare institutions. The article discusses the methodological foundations of distance education and focuses on its main types: classical, emergency, and open. During the pandemic and military operations, the participants of the educational process took part in emergency distance learning, so the main challenge was the need to adapt the curriculum to unusual conditions. The analysis of the experience of teaching obstetrics, gynaecology, and ultrasound diagnostics during the pandemic demonstrated the effectiveness of various methods, such as video conferencing, use of virtual patients and case methods. At the same time, problems related to unequal access to technology and psychological difficulties were identified. The conditions of the military conflict have exacerbated some problems associated with distance education, in particular, those related to psychological stress. However, for certain regions, distance education remains virtually the only available educational practice. It is now important to pay more attention to asynchronous learning methods and psychological support for students.

The pandemic experience has also contributed to the development of telemedicine in obstetrics and gynaecology,

which has proved extremely useful in providing medical services and consultations under restrictions. Overall, distance learning technologies are now a necessary component of medical education, effectively complementing traditional teaching methods. Given all the above, a complete return to classical educational practices in the modern digital world seems unlikely. There is a growing trend towards digital transformation in education in general and medical education in particular. The optimal solution may be a combination of classical and distance learning methods, using modern information and technical resources. This approach will allow students and teachers to enjoy the benefits of traditional learning, as well as effectively implement digital tools to improve the learning process, minimizing the disadvantages of each. It is important to continue to improve teaching methods, considering the specifics of medical specialities, and to ensure equal access to education through the use of modern technologies. The development and improvement of educational platforms that provide access to relevant courses and materials in obstetrics, gynaecology, and ultrasound diagnostics can be seen as a leading area for further research in this area. Also, researchers should make efforts to study effective pedagogical methods and strategies specific to distance learning in medical sciences. In addition, an important area for further research is to analyse ways to integrate distance education practices into the teaching of clinical disciplines to medical students in conditions of forced distance learning.

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## CONFLICT OF INTEREST

The authors of this study declare no conflict of interest.

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# Дистанційна освіта в галузі акушерства, гінекологоії та ультразвукової діагностики в умовах карантинних обмежень та бойових дій: літературний огляд

**Анотація.** Вимушене дистанціювання в умовах пандемії COVID-19 викликало необхідність переходу медичної освіти на дистанційну форму навчання. Проблема поглибилася у зв'язку з початком повномасштабних бойових дій, що зумовило необхідність подальших досліджень у цій галузі. Метою роботи був комплексний огляд сучасних наукових матеріалів та консолідація наявних знань стосовно проведення освітньої діяльності в галузі акушерства, гінекології та ультразвукової діагностики в умовах пандемії коронавірусної інфекції і повномасштабних бойових дій. Для проведення дослідження використано такі методи: бібліографічний, аналіз, синтез, індукція, узагальнення, аналогія, систематизація та категоризація. У матеріалі представлено комплексний аналіз актуальної літератури щодо подолання педагогічних викликів в умовах пандемії COVID-19 та військових дій за допомогою досягнень дистанційної освіти. Розглянуто методологічні основи дистанційної освіти, особливості застосування цієї практики в умовах пандемії та воєнних дій, спільне і відмінне між ними, особливо в контексті акушерства, гінекології та ультразвукової діагностики. Представлено зв'язок між телемедициною та дистанційним навчанням як на рівні теорії, так і практики. Порівняно практику дистанційного навчання в акушерстві та гінекології з деякими іншими клінічними дисциплінами. Результатом дослідження стало вирішення проблеми відсутності системного погляду на адаптацію освітнього процесу до умов пандемії та військових дій як саме екстреного дистанційного навчання, а не класичної практики дистанційної освіти, що сприяє формуванню адекватної оцінки проведеної в подібних умовах педагогічної діяльності, зокрема в галузі акушерства, гінекології та ультразвукової діагностики. Результати дослідження мають практичне значення у сфері медичної освіти, де вони можуть бути застосовані для розробки рекомендацій щодо організації навчання акушерства й гінекології чи інших медичних дисциплін в умовах вимушеного дистанціонування

**Ключові слова:** освітня діяльність; інформаційні технології; телемедицина; цифровізація; симуляційна медицина