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DISTANCE LEARNING IN MEDICAL EDUCATION IN QUARANTINE COVID-19

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ABSTRACT

Covid-19 has been declared as a pandemic disease by the WHO on March 11th, 2020. The disease started in Wuhan province in China in late December 2019. Since that time, the global incidence of COVID-19 disease has increased dramatically.

Preparation of students at the Department of Surgery. Algorithm for conducting distance education.

Distance learning of students in conditions quarantine Covid-19. The question of the use of this form of education in medical educational institutions remains controversial. On the one hand, the advantages of distance education are the possibility of teaching a large number of students at once, facilitating the educational process, in the case of teaching people with disabilities, adaptability - learning using modern software and hardware makes e-education more effective, also, usually, distance learning is cheaper than regular education. first of all, by reducing the cost of moving, living in another city, reducing the cost of organizing the courses themselves. Opponents of the use of distance education in medicine believe that mastering practical skills, which are the main component in training future medical workers, is impossible in this way. However, in our opinion, the use of this form of education in medical schools is not only possible, but necessary.

Amid the COVID-19 pandemic, the majority of the student (n = 538; 82.5%) have participated in distance learning in their medical schools. Further analysis of the non-participating students showed that 6th-year students were the least to be involved in distance learning as the majority of them have completed their academic courses before the COVID-19 curfew.

With advances in technologies and social media, distance learning is a new and rapidly growing approach for undergraduate, postgraduate, and health care providers. Regardless of reported benefits, medical students preferred the blended approach in teaching as distance learning represented a major challenge to acquire adequate clinical medical skills. Naturally, training a doctor in practical skills requires traditional face-to-face contact, but all theoretical training and exercise in decision-making can take place remotely.

Keywords: *Distance learning, Medical students, COVID-19*

1. INTRODUCTION

Covid-19 has been declared as a pandemic disease by the WHO on March 11th, 2020. The disease started in Wuhan province in China in late December 2019. Since that time, the global incidence of COVID-19 disease has increased dramatically. Distance learning of students in conditions quarantine Covid-19. The question of the use of this form of education in medical educational institutions remains controversial. On the one hand, the advantages of distance education are the possibility of teaching a large number of students at once, facilitating the educational process, in the case of teaching people with disabilities, adaptability - learning using modern software and hardware makes e-education more effective, also, usually, distance learning is cheaper than regular education. first of all, by reducing the cost of moving, living in another city, reducing the cost of organizing the courses themselves.

On the 13th of March, the emergency state was announced in Ukraine followed by the curfew on 21 March. Similar to other sectors, the educational sector has been affected by this pandemic situation. All educational institutions have been closed as well as educational activities have been suspended on the 15th of March. As part of that, the all medical schools in Ukraine in stopped all their teaching and training activities.

Distance E-learning has emerged as a new method of teaching to maintain the continuity of medical education during the COVID-19 pandemic related closure of educational institutions.

Medical education programs in Ukraine are six-year programs, in which clinical medical years are the last 3 years in the curriculum. During clinical education, students receive both in-class theoretical lectures and seminars, and in-hospital clinical rotations. Before the era of COVID-19, distance e-learning was not adopted as a modality of teaching within medical schools.

Distance E-learning in medical education may represent a suitable alternative to traditional learning to deliver high-quality education. The availability of essential infrastructures and efficient institutional strategies represent a major challenge for integrating distance learning in medical education. [1].

Even blended education (i.e. distance and on-campus) is well adopted in different word countries, the effect of distance electronic learning is likely to be revolutionary especially in low-middle income countries.

Distance E-Learning is defined as using computer technology to deliver training, including technology-supported learning either online, offline, or both. It is aimed at the effective construction of knowledge regarding individual experience, practice, and knowledge of the learners and students.

Internet-based learning, computer-based learning, virtual classrooms, and digital collaboration all represent different types of e-learning.

There are 2 modes of E-learning: distance learning and computer-assisted interaction (CAI). Moore et al. defined distance E-learning as providing access to learning for those who are geographically remote from the instructor, while CAI is an interactive technique whereby instructional material is presented by and a computer, and students' progress is monitored and evaluated during this process. [4].

Distance E-learning has been proved as an efficient modality of learning in different educational and governmental studies. Data from the Institute of Educational Studies showed that learners revealed a more active attitude in learning when various methods such as electronic books and on-line articles were implemented in the teaching process. [3].

These generations are Cognitive-behaviourism, Constructivism, and Connectivism. Each one of these generations has distinguished utilized technology, learning activities, learner and content granularity, evaluation modality, scalability and instructor role.

These generations have developed in concordance with available technologies. They stated that no single modality has provided all answers, and each of these generations has built on achievements of previous generation. [2].

This study aims to explore the situation of distance e-learning among medical students during their clinical years and to identify possible challenges, limitations, satisfaction as well as their perspectives for this the approach of learning.

To the best of our knowledge, no published study discussing the current situation of distance e-learning among medical students in their clinical years is available. Students' satisfactions, limitations, and perspectives have been addressed in our study as well.

2. METHODS

The questionnaire was distributed on May 15th, 2020 using previously created students Facebook and WhatsApp groups that were adopted by medical schools for communication with their students.

Questions were in two formats, multiple-choice and rating questions on a five-point scale (Likert scale). For simplifying statistical analysis, the five categories were regrouped into three categories, and were labeled as agree, neutral and disagree.

These questions were mainly about student's demographics (age, gender, academic years and medical school), prior and current experience with distance learning, available technologies, distance learning benefits, drawbacks, their instructors' influence, challenges, attitudes towards the effectiveness of distance learning in medical education, and their perceptions about the future of distance learning in medical education. [5].

Accordingly, this study included a convenient sample of 1058 students who are currently enrolled in their clinical years.

Objectives and goals were explained at the beginning of the questionnaire to all participating students, and their enrollment was after they consent to participate in the study.

Data were analyzed using the statistical package for the social sciences version 23 (SPSS Inc., Chicago, IL) statistical software. The analyses included descriptive statistics and chi-square test. A $P < 0.05$ was considered statistically significant.

3. RESULTS

Amid the COVID-19 pandemic, the majority of the student ($n = 538$; 82.5%) have participated in distance learning in their medical schools. Further analysis of the non-participating students showed that 6th-year students were the least to be involved in distance learning as the majority of them have completed their academic courses before the COVID-19 curfew.

Among the 538 students, smartphones were the most commonly used single device in e-learning (35.9%) followed by computers either laptops or desktops (14.5%). Two hundred and sixty seven students (49.6%) utilized multiple devices to access their learning sessions.

4. CONCLUSION

With advances in technologies and social media, distance learning is a new and rapidly growing approach for undergraduate, postgraduate, and health care providers. [6]. Regardless of reported benefits, medical students preferred the blended approach in teaching as distance learning represented a major challenge to acquire adequate clinical medical skills.

Satisfaction in distance learning is strongly linked to students' prior experience in distance learning as well as instructors' experiences and interactions.

Technical and infrastructural resources reported as a major challenge for implementing distance learning, so understanding technological, financial, institutional, educators, and student barriers are essential for the successful implementation of distance learning in medical education.

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