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ONLINE EDUCATION IN MEDICAL UNIVERSITY DURING COVID-19 PANDEMIC

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Abstract. *Due to the development and widespread of the COVID-19 pandemic around the world, and the need to continue the educational process at both undergraduate and postgraduate levels, many universities and other educational institutions have undergone changes in the educational process [1, 2]. Thus, the Odessa National Medical University at the cycle of Simulation Medicine has developed and implemented online educational programs for 6th year students and interns with the use of Microsoft Teams [3]. It should be noted that one of the main missions of the cycle is training aimed at identifying and assessing the acquisition of clinical skills by students [4, 5] and their acquisition of professional competencies - for the successful completion of OSCE (Objective Structured Clinical Exam).*

Materials. During the COVID-19 pandemic and official quarantine restrictions, classes with different groups of students (students and interns) were conducted under different conditions. Depending on the period of quarantine restrictions, students' classes were divided into either completely online or hybrid. With the hybrid type of classes, students had the opportunity to practice some practical skills on their own, as well as they had an opportunity to pass a differential test offline, in compliance with all official quarantine requirements during a pandemic.

To evaluate the effectiveness of different types of training, the results of 75 applicants were processed. SimuLab mannequins were used for practical skills.

Applicants were divided into 3 groups: 1 group - 6th year students whose practical skills classes were conducted online, but the differential test was taken offline with a mannequin; 2 group - 6th year students who came to classes physically only on the day of practical skills (and on all other days classes were held online), and made a dif. test offline; 3 group - interns in the specialty "General Practice - Family Medicine", who came physically to classes, and according to the Study Program have a credit form of passing the cycle, i.e. performed practical skills directly in class and do not have a differential test.

The results were evaluated according to the following parameters:

1. The mark was obtained on a traditional 5-point scale using checklists.
2. Execution time of practical skills in seconds.

Statistical criteria used included parametric and nonparametric analysis methods: One-way ANOVA + test Newman-Keuls and Kruskal-Wallis ANOVA + Median test.

Results and discussions. Applicants in group 1 received a total score of dif. test by 23.5% lower than in group 2 ($P < 0.05$). Similarly, 1 group received an evaluation result 25.4% lower compared to 3 group ($P < 0.05$). At the same time, there

was no significant difference between groups 2 and 3 in obtaining the mark 2.16 % ($P>0.05$).

The average value of the speed of practical skills in groups № 2 was the lowest, and differed from the largest value in group № 1 by 33.45 % ($P<0.05$). The results of groups № 1 and № 3 also differ significantly and were 25.73 % and 17.13 % more than in group № 2, and also differ between themselves by 15.9 % ($P<0.05$).

Thus, interns (group № 3) received the highest score as well as 6th year students (group № 2), who had the opportunity to practice practical skills before the assessment.

The biggest difference was observed between the groups of 6th year students who had the opportunity to practice practical skills and those who had online classes on this topic.

Conclusions. The results show that, in addition to theoretical discussion and demonstration of practical skills during online classes, the ability to practice the skill of each student separately under the guidance and supervision of a teacher is crucial.

At the same time, online learning is very convenient and effective for mastering the theoretical knowledge base, it is possible to implement both during quarantine restrictions, and in general to move partially to this type of training, namely: lectures - can be in the form of recorded videos (gives more free time for lecturers for other science activities) and online through Microsoft Teams, Zoom and many other platforms; testing - conducting any testing of students in online forms, the use of Google forms allows us to do it for free.

In addition to reducing the possibility of contracting infectious diseases, another advantage is the reduction of travel time, i.e. increasing the time for other types of trainings. Also, for educational institutions, an obvious advantage is the increase in the area of educational facilities for other types of educational and scientific activities.

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