

EFFECTIVENESS OF THE APPLICATION OF CLINICAL CASES IN THE EDUCATIONAL PROCESS

Abdrachmanova M.T., Baydildina B.N., Dzhabayeva S.Ye.

Scientific adviser: V.A. Burmistrova

KSMU, Kazakhstan, e-mail: makpal_mia@mail.ru

The aim of the research is to assess the effectiveness of training using clinical cases according to the program “Erasmus Plus”. The tasks of the research are to identify differences in the performance of students who are trained with the use of clinical cases and those ones who are trained by traditional methods; as well as to identify advantages and disadvantages of the innovative method. The survey was conducted among 86 4-year students of the specialty “General Medicine” (Karaganda State Medical University). It has been established that the innovative method has more advantages in comparison with traditional teaching methods.

Keywords: Erasmus Plus, case study, clinical cases, teaching methods, innovations

“Erasmus Plus” is a new program of the European Union for the period from 2014 to 2020, aimed at supporting projects, cooperation, academic mobility in the field of education, training, sports and youth policy. The program is aimed at further promoting the modernization and sustainable development of education system, supporting the development of youth policy and sports as well as improving skills and, thus, improving the employment opportunities for people. The new program envisages a significant increase in investments in human development.

In the framework of this program, training of 4-year students of KSMU (Karaganda State Medical University) is provided on the base of adopted clinical cases.

Despite obvious advantages of classes given according to the new innovative method, among pedagogical literature, there are not scientific researches devoted to the analysis of advantages and disadvantages of application of the program in the educational process. It was key factor in conducting this research.

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The tasks of the research

1) to identify differences in the performance of students who are trained with the use of clinical cases and those ones who are trained by traditional methods;

2) to identify advantages and disadvantages of the innovative method.

Materials and methods of research

The survey was conducted among 4 groups of 4-year students (43 students) of the specialty “General Medicine” who were trained in the discipline “Children’s diseases” according to the program “Erasmus Plus” on the basis of

clinical cases – 6 separating and 6 linear cases; and the same number of students who studied this discipline by traditional methods.

The questionnaire included the following questions:

1. Do you think there were any advantages in the case study? If so, describe these features. And why do they seem to be strengths?

2. Do you think there were any disadvantages in the case study? If so, describe these features. And why do they seem to be weaknesses?

3. How would you rate your mental strain during the solving of a case (from 0 to 10 points)?

4. Choose your impression of working with a case with a virtual patient from the presented options, such as:

– I make decisions, which would be made by the doctor in real life;

– As the scenario developed and new information was received, I was actively involved in the process of revising the initial vision of the patient’s problems;

– While working on this case, I was constantly thinking about what kind of new information would confirm or disprove the differentiated diagnoses formulated initially;

– After solving the case, I had the opportunity to prepare better for work with differential diagnostics and confirm the patient’s exact diagnosis based on his problems – complaints.

5. Please, note how much you are sure you would have coped with the following tasks before and after the case.

Results of research and their discussion

The analysis of students’ academic performance in the groups, in which a number of topics were studied in accordance with the cases, showed higher results (87% – grade average)

comparing with the performance in the groups where training was not conducted in accordance with adopted cases (84% – grade average). However, these differences were not significant.

According to the results of the questionnaire, the following advantages of the innovative method were identified: cases were as close as possible to actual clinical practice and allowed to develop the ability to concentrate on solving problems of a specific virtual patient, increased the skills of teamwork, with the adoption of a common solution. It was also noted that the complex approach to conducting classes in discipline using clinical cases increased the skills of clinical thinking and sense of responsibility. In the general complex, one of the most important elements of the analysis of the clinical cases by the student, apart from the correctness of the decision, was the high level of activity of each student, the completeness and originality of the solution, the ability to evaluate their work and the activity of each member of the group. The method gave the opportunity to the students to develop their clinical thinking on the topic with the use of knowledge of Anatomy, Physiology, Evidence-Based Medicine and other related sciences. Students could develop the ability to accept different points of view, the ability to cooperate and resolve conflicts in the process of teamwork. This approach gave the teacher an opportunity to assess several students in a short time.

The following disadvantages of this method were noted: the lack of the possibility of conversation and application of objective examination of a particular patient. Some students had difficulties in working in a team; the lack of individual assessment of each student.

When assessing the mental strain of students during solving the case, mainly an average degree (5-6 points) of mental strain was noted; this had no effect on the outcome of the work in the team. The activity of students was also revealed in the form of desire to participate in research work of the department and university as a whole, interest in the topic of the lesson.

Conclusions

Thus, the experience of teaching students using the innovative method, in our opinion, combined with problem lectures, can determine high efficiency in professional orientation, the formation of clinical thinking and creative approach to the learning process. The obtained subtle differences in students' academic performance may be determined by the fact that the introduction of new teaching methods in pedagogical practice is not a matter of one day. It would be very useful to create a system of exchange and transfer of experience of their use at the university level.

In conclusion, we would like to express gratitude to our scientific adviser – the Head of Foreign Languages Department, c.p.s., associate professor V.A. Burmistrova.