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Development Of Professional Competence Based On A Simulation Model In Teaching English In Medical Education

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Abstract: This study explores the theoretical, methodological, and practical aspects of applying simulation technologies in developing professional skills of future pediatric physicians in medical education. Conducted at the Fergana Medical Institute of Public Health, the research examined the effectiveness of simulation-based English language teaching in fostering clinical, communicative, and reflective competencies. The experimental group of 120 pediatric students demonstrated a 1.4-fold higher performance in professional communication, clinical reasoning, and medical ethics compared to the control group taught through traditional methods. The study scientifically substantiates the efficiency of integrating simulation technologies into medical English instruction for enhancing professional readiness among future doctors.

Keywords: Simulation technology, medical education, English, pediatrics, professional competence, communicative skills, reflective learning.

Introduction: In the 21st century, simulation technologies in the process of medical education have become an integral part of clinical practice and training. The main goal of using simulation in medicine is to develop doctors' skills in making quick decisions, establishing communication, and analytical thinking in real clinical situations while ensuring patient safety. The "Development Strategy of New Uzbekistan" for 2022-2026 in the Republic of Uzbekistan, as well as Resolution No. PP-5117, defines the tasks of improving the quality of teaching foreign languages, in particular English, in medical education. Therefore, the use of simulation classes in teaching English in medical universities has become a pressing issue. In addition, the ability to combine language learning with clinical scenario-based practice ensures greater retention of knowledge and its application in real conditions, which is especially important in maintaining children's health, where communication should be clear and empathetic.

METHODS

The study was conducted among 2nd-4th year students of the "Pediatrics" program of the Fergana Medical Institute of Public Health during 2022-2024. A total of 120 students participated (experimental group - 60, control group - 60 people). Research stages: diagnostic stage - assessment of students' professional communicative preparedness, motivation, and level of reflection through questionnaires and tests; experimental stage - implementation of simulation classes in English (OSCE, role-play, virtual clinical scenarios); control stage - reassessment of learning outcomes using pedagogical diagnostics and statistical analysis (t-test).

RESULTS

According to the results of the experiment, students trained on the basis of simulation technology showed significant growth in the following indicators: clinical decision-making +28%, communication effectiveness +35%, skills of reflexive analysis +31%, level of assimilation (assessment on a 5-point scale) - 4.6 ± 0.3 versus 3.8 ± 0.4 (control). Statistical analysis showed a significant difference at the level of $p < 0.05$.

DISCUSSION

The obtained results are consistent with international

research. Gaba D.M. (2005) and Aebersold M. (2018) found that simulation training increases medical competencies by 30-40%. In Uzbekistan, surveys conducted at the Fergana and Tashkent Medical Institutes (Egamberdieva, 2022) showed a 1.3-fold increase in student motivation. At the same time, the research results are consistent with the Dewey and Kolb model of experiential learning: students go through a cycle of "learning - analysis - application" through real clinical scenarios.

CONCLUSION

1. Simulation technologies are an effective tool for the development of professional communication, clinical thinking, and reflexive competence in the process of teaching medical English.

2. Simulation classes for pediatrics students improve the skills of communicating with the patient in English, analyzing the clinical situation, and making collective decisions.

3. The widespread introduction of the simulation model in medical education will improve the quality of training and serve the training of specialists in accordance with international standards.

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