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PHYSICS AND MATHEMATICS STUDYING IN MIDDLE SCHOOL
AS A BACKGROUND FOR MEDICAL EDUCATION

Over the last few decades, there has been a sharp decline in the level of school knowledge in physics and mathematics. This can be traced to the results of the entrance examinations of the entrants who have entered the specialties "Medicine", "Pediatrics", "Dentistry" and "Pharmacy" of medical universities.

The low basic level of knowledge in physics and mathematics significantly complicates the quality assimilation by students of academic disciplines, which require analytical thinking and analysis of the obtained results.

The purpose of this article is to highlight the role of physics and mathematics in the successful acquisition of the profession of doctor, dentist or pharmacist. The goal is to increase motivation to study these disciplines by demonstrating the impact of the achievements of physical science and technology on the development of medicine and highlighting the importance of mathematics for theoretical medicine.

The article pays attention of middle school teachers to the role of school physics and mathematics courses in qualitative education of future physicians.

The purpose of this article is illustration of basic knowledge importance of the mathematics and physics disciplines for the natural sciences studying, in special, of medical and biological physics by students of medicine and dentistry faculties, biological physics and physical methods of analysis, higher mathematics and statistics by students in pharmacy, industrial pharmacy in pharmacy faculty and to specify the scope of these disciplines knowledge practical application.

For studying of physics and mathematics importance for obtaining a medical education are used the following methods: theoretical – analysis of scientific publications on this issue; studying the order of the Ministry of Education and Science regarding to the conditions for admission to study at higher education establishment of Ukraine in 2019; practical - analysis of background knowledge control results of first-year students in physics and mathematics.

The conducted research revealed the presence of a big number of students with a low basic level of knowledge in physics and mathematics that complicates the understanding and assimilation of their courses at the medical university. The importance of knowledge in physics and mathematics for the practical medicine is shown. It is emphasized that the medicine achievements are linked to the scientific achievements of physics and techniques development. Thus, the motivation for successful mastering of physics and mathematics is formed for the students who choose medical education.

Modern evidence-based medicine is an exact natural science discipline, which emphasizes the importance of students obtaining qualitative knowledge in the disciplines of natural science (physics, chemistry, biology, mathematics). In addition, physics and mathematics develop logical thinking, the ability to analyze the results and find the cause and effect of processes and phenomena in medicine. Motivational changes in teaching physics and mathematics at school will be a significant factor in the successful acquisition of knowledge by students at a medical university.