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 Research Article

## ANATOMY AS A BASIC SCIENCE IN MEDICAL EDUCATION

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## ABSTRACT

Human anatomy is a fundamental subject of medical education, knowledge of which is necessary for the professional training of doctors of any specialty. It is the first step in the formation of clinical thinking. A doctor who does not know anatomy is helpless in practical actions, unconvincing in judgments, and cannot fully analyze examination data.

## KEYWORDS

Human anatomy, strategy, quality of education, medicine, clinical motivation, teaching, body systems.

## INTRODUCTION

Anatomy is the fairway along which the traveler enters the wide harbor of medicine. The department of anatomy is the first most

important frontier that must be crossed by the one entering medicine. Studying at medical universities has its own specific features, in

particular, studying human anatomy, Latin, human biology with genetics, where the student must prepare for mastering clinical disciplines. Studying medical-biological and medical-preventive disciplines contributes to fundamental training and creative development, ideologically and morally equips the future specialist to conduct theoretical and applied research taking into account the growing market, demand and supply, and timely adaptation to the conjuncture of unpredictable phenomena, crises, situations, modernization of education. At the same time, the student must understand the unity of scientific knowledge, market mechanisms and deep professionalism, the interaction of all sciences, the relationship of experimental, clinical and abstract-theoretical research methods, taking into account the uniform requirements of contextual education. To achieve the fulfillment of the requirements of university life, the teaching staff must know the features of student psychology from the first year to graduation, their adaptation to the specifics of education, in particular in medical universities.

**Literature analysis.** Historically, the initial principle in teaching human anatomy as an academic discipline was the description of body parts and organ systems taking into account their topography and inextricably linked with functions at the macro- and microscopic levels, taking into account age-related variability and gender differences. Anatomy, as is known, includes a huge amount of information and requires new serious methodological approaches from teachers that help students better master

the subject. As early as the last century, P.F. Lesgaft set the task of the teacher "to teach thinking, thinking anatomy." In modern teaching of human anatomy, students' attention should be focused on the study of applied anatomy, on the clinical focus of the significance of the structures being studied, which is important in the general practice of a doctor. It is most expedient to teach and study anatomy in the context of an emphasis on structures and functions in a wide range of normal variability and in connection with pathology.

The life of every future doctor begins at the anatomy department. In the first year of medical school in the first semester, human anatomy is the only medical discipline where students begin to study consistently and thoroughly all the subtleties of the structure of the human body, but not only receive fundamental knowledge, but also become familiar with medicine as a whole, learn the rules of discipline in medical institutions, dress code, behavior, etc. The leading principle in the process of studying human anatomy is the principle of clarity. The substantive side of the learning process in anatomy, like in no other discipline, is the clarity of teaching. Natural preparations of human organs, presented separately or in a system of organs, accompany the process of learning anatomy.

If students study on organ preparations, they see the difference between them and their "smoothed" images in atlases, during virtual learning. A student can get a spatial idea of an organ and its parts only through a preparation that carries "clarity" - a fundamental principle of



studying anatomy. Deep didactic meaning has the allocation through the peculiarity of some anatomical structure of the organ of its biological and clinical significance, since this small "detail" of the organ is important for the physiology of the organ, for the entire system of the human body or have significant importance for further clinical training. Although it cannot be denied that some students perceive educational information well through modern computer technologies with anatomical visualization.

**Analysis.** Visual and sensory perception of specific sections of anatomy is greatly enhanced by students' preparation of anatomical material under the guidance of a teacher outside of class time. However, life brings new factors into the learning process that change the teaching of anatomy. Due to the reduction in time allocated for studying anatomy, the number of hours for studying anatomy through routine preparation has decreased in recent years.

Many universities have abandoned the dissection of the human body, and students study anatomy on wet preparations, plastinated cadavers, on dummies and models. But one cannot but agree that it is the preparation of cadaveric material that is the most suitable way to study the three-dimensional anatomy of the human body. This is an educational and research process that gives students their first preclinical thinking and develops their first manual sensitivity, guides them through the instruments and teaches them how to use them correctly, which will be necessary for them in their senior years and later in their professional activities.

Anatomy provides knowledge about the condition of the whole organism and individual organs depending on age and functional factors, under the influence of physical exercise, professional environment, working and living conditions. Therefore, in teaching anatomy, emphasis should be placed on the practical, functional context. For example, when studying the musculoskeletal system, attention should be paid to the function of muscles, muscle groups in everyday activity, their participation in gait, and their importance in post-traumatic rehabilitation therapy; when studying arthrosyndesmology, attention should be paid to the role of ligaments, capsules and intra-articular structures in dislocations and injuries, their position, attachment, shapes, blood supply features, innervation, age, gender and constitutional differences; When studying the lungs and pleura, their topography - to acquaint students with various manipulations, such as, for example, thoracocentesis (insertion of a drainage tube using a trocar in the 2nd intercostal space along the midclavicular line to remove air) or in the 5-6 intercostal space (to remove pathological accumulations from the pleural cavity), pleural puncture, bronchoscopy, transthoracic and transbronchial lung biopsy, etc. When studying peripheral nerves - for example, to explain the clinical picture in case of pathology of individual nerves, their plexuses from an anatomical position; when studying the vascular system, to anatomically substantiate the essence of a number of surgical approaches - bypass or stenting of vessels in ischemic diseases of the



arteries; the clinical significance of lymph drainage from organs, etc.

Topographic anatomy studies the spatial arrangement of anatomical structures by body regions (head, neck, torso and limbs) in light of their functional interactions. The weak point of first-year students' knowledge is the lack of understanding of topographic-anatomical relationships of organs, layered topography of body regions, arrangement of vascular-nerve bundles between them and cellular spaces, which allows understanding surgical approaches to organs, determining the levels of vascular ligation, places of nerve exposure, causes of transition of purulent-inflammatory processes by cellular space communications from one region to another, assessing the advantages of some surgical interventions (for example, extraperitoneal access to the bladder, transpleural puncture of the pericardium in the lower interpleural field). In teaching anatomy, it is important to focus students' attention on variant anatomy, projection, orientation, considering the variability of the structure and position of body structures, their relationship to the skin and a number of landmarks.

The proposed teaching methods help develop the student's skills in mastering anatomical information, creatively approaching the analysis of morphological data, and bring theoretical knowledge of human anatomy closer to the needs of the clinic. Medical universities still do not pay enough attention to the development of individual creative thinking in students. When teaching human anatomy, developmental

teaching methods are not sufficiently implemented; the function of traditional forms and methods of teaching should be reoriented to the self-development of students' creative thinking. On the other hand, a serious problem in medical universities has become the reduction in the number of hours devoted to the study of human anatomy, which is especially important for certain specialties ("dentistry", "medical and preventive care", "nursing", "pharmacy"), especially for those students who already need professional training in anatomy in the chosen specialty.

## CONCLUSION

To implement problem-oriented learning, along with the traditional (visual demonstration and explanation), it is necessary in teaching anatomy: to emphasize the practical, functional context; pay more attention to the topographic and anatomical relationships of organs; highlight their clinical aspects through the details of the structure of organs; introduce into the educational process an explanation and general familiarization with the data of various clinical studies of man; use modern audiovisual technical means of teaching, multimedia complexes, interactive boards and interactive tables; make wider use of museum preparations in the learning process, dissection of anatomical material by students under the guidance of a teacher outside of class time.

The advantages of using situational tasks in teaching students are that they promote interest

in the subject, consolidation of acquired knowledge, independent work with literature, the ability to operate with available anatomical information and creatively approach the analysis of morphological data, help the student to check the correctness of his anatomical ideas in their clinical aspect, study the structure of the human body in more depth.

## REFERENCES

1. .Анатомия человека / Марк Крокер; Пер. с англ. А. И. Кима, М. : РОСМЭН, 2000.
2. Анатомия человека. Учебник для российских и иностранных студентов медицинских вузов и факультетов / М. Г. Привес, Н. К. Лысенков, В. И. Бушкович, Санкт-Петербург : Изд. дом СПбМАПО, 2006.
3. Гайворонский И.В. Нормальная анатомия человека: учебник для медицинских вузов / 10 изд., перераб и доп. – СПб.: СпецЛит, 2016.
4. Сапин М.Р. Анатомия человека: атлас: учебное пособие в 3-х томах. Науч. ред. В.Н. Николенко. Том 1. Москва: Медицина. 2016.
5. Abdivaliyevna, A. N., & Azim, O. (2024). PSYCHOLOGICAL CHARACTERISTICS OF ANXIETY IN STUDENTS. International Journal of Advance Scientific Research, 4(03), 25-29.
6. Abdivaliyevna, A. N. (2023). Factors of Psychosomatic Diseases in School Children. European Journal of Pedagogical Initiatives and Educational Practices, 1(1), 65-67.
7. Аскарлова, Н. А., & Ибрагимова, Н. (2022). Психологические аспекты влияния личности врача на лечебный процесс. Innovative Society: Problems, Analysis and Development Prospects (Spain), 121-125.
8. Abdivaliyevna, A. N. (2023). THE INFLUENCE OF THE GLOBAL INTERNET ON THE PSYCHE OF ADOLESCENTS.
9. Аскарлова, Н. А., & Сайфуллаева, З. И. (2021). ЭФФЕКТИВНОСТЬ ИСПОЛЬЗОВАНИЯ ИНТЕРАКТИВНЫХ МЕТОДОВ ОБУЧЕНИЯ. 17December, 2021, 30.
10. Аскарлова, Н. А., & Намозов, М. Х. (2016). Психологические особенности создание положительных взаимоотношений между врачом и больным. In Сборники конференций НИЦ Социосфера (No. 7, pp. 42-43). Vedecko vydavatelske centrum Sociosfera-CZ sro.
11. Аскарлова, Н. А., & Қобилжонов, Ж. Қ. Психологические особенности адаптационного потенциала личности больных сердечно-сосудистыми заболеваниями.
12. Abdivalyevna, A. N., & Farmonova, E. (2024). CHARACTERISTICS OF THE DEVELOPMENT OF COGNITIVE PROCESSES IN PRIMARY SCHOOL STUDENTS. International Journal of Advance Scientific Research, 4(03), 35-39.
13. Abdivalyevna, A. N., & Abdukhmid, A. F. (2023). FACTORS CAUSING PERSONAL PSYCHOSOMATIC DISORDERS. International Journal of Advance Scientific Research, 3(11), 343-347.
14. Abdivaliyevna, A. N. (2023). PSYCHOLOGICAL FEATURES OF THE PROFESSIONAL

FORMATION OF THE DOCTOR'S  
PERSONALITY.

15. Abdivaliyeva, A. N. (2022). Psychological features of adaptation of students abroad. Innovative Society: Problems, Analysis and Development Prospects (Spain), 117-120.

