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**IV Науково-практична конференція з
міжнародною участю**

**«Фізична активність і якість життя
людини»**

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**ШАНОВНІ КОЛЕГИ, ВИКЛАДАЧІ,
СТУДЕНТИ!**

**24 ЛЮТОГО 2022 РОКУ РФ ЦИНІЧНО ТА
ЖОРСТОКО НАПАЛА НА УКРАЇНУ.
СЬОГОДНІ В НАШІЙ КРАЇНІ ТРИВАЄ
НЕВПИННА БОРОТЬБА ЗА СВОБОДУ ТА
ЖИТТЯ ВСІХ УКРАЇНЦІВ. МИ
ВКЛОНЯЄМОСЬ ЗСУ, МИ ВКЛОНЯЄМОСЬ
ПЕРЕД КОЖНИМ, ХТО
БОРОНИТЬ НАС!**

**НЕ ДОЗВОЛИМО ВІЙНІ ЗАБРАТИ НАШЕ
ПРАВО НАВЧАТИСЯ ТА РОЗВИВАТИСЯ!**

Разом, ми - сила!

І разом ми переможемо!

Слава Україні! Героям Слава!

Куций Д.В., Кириченко М.П.

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SCIENTIFIC RESEARCH METHODOLOGY FOR DETERMINING THE CONTENT OF PROFESSIONAL APPLIED PHYSICAL TRAINING OF MEDICAL STUDENTS UNIVERSITIES

Introduction. The profession of a doctor is associated with considerable mental and physical stress. In this regard, attention is currently focused on the problem of developing professionally important qualities of a specialist's personality, which can be solved in the process of professional training of medical students [1]. On the basis of the conducted research, specialists identified and systematized professionally important characteristics of future specialists, which show that such qualities

of a modern specialist as stress resistance, balance, optimal level are valued anxiety, work capacity and, above all, health. Among the requirements for the professionally important personality qualities of a specialist doctor, M.M. Filonenko notes endurance, strength qualities, as well as willpower, purposefulness, neuropsychological stability, and the presence of a wide range of functional capabilities of the cardiovascular system and musculoskeletal system. Today, specialists are interested in issues related to the influence of physical education on the development of the personality of a medical specialist. I.Yu. Nikolaychuk, researching the psychological characteristics of medical students, found that during their studies at a medical university, their professional qualities undergo significant changes, in many ways bringing students closer to the person of a real doctor, but the level of formation of these qualities does not always meet the requirements for ensuring high indicators of professional activity and health preservation of medical staff. The professional development of a doctor consists of the level of physical and psychological adaptation to professional activity.

Yes, I.Yu.Nikolaychuk suggests that when developing a system of measures to increase the level of physical activity of students of medical specialties, they should take into account the

peculiarities of the professional activity of a doctor, such as the absence of total expenditure of muscle effort during relatively local movements and the growing demands of emergency processing of a large volume of sensory information and the need to perform quick psychomotor reactions. The author claims that the specific working conditions require the doctor to have a fairly high level of static endurance of the muscles of the arms and trunk, excellent coordination of hands and fingers with relative immobility of the lower limbs [1, 7].

Despite a sufficient number of studies aimed at studying the characteristics of the body of students of higher medical educational institutions, among the studies of domestic specialists, we did not find any that were aimed at studying the characteristics of the physical condition and the level of professionally important qualities of medical students. The study of literary sources showed that specialists, considering the issue of physical education of students of higher medical educational institutions, do not pay enough attention to the justification of the necessary professional mental and spiritual-physical qualities of the doctor's personality and to the elucidation of the influence of physical rehabilitation, physical culture and sports on the education of these qualities, as well as determined the choice of the research topic.

In order to clarify the methodology of the scientific search for the content of professionally significant mental and physical qualities of a doctor, we conduct research in which students of the 1st - 6th years of the Kharkiv National Medical University participate.

The purpose and tasks of the work: to analyze indicators of the physical condition of students. To reveal the peculiarities of professional and applied orientation of physical training in training and education of habits for a healthy lifestyle of a doctor.

During the research, biological methods of determining the functional capabilities and physical development of the students' body, methods of mathematical statistics were used. The object of the study was the morpho-functional indicators of medical students, and the subject of the study was the peculiarities of physical development, adaptation potential and physical condition of the subjects.

30 male and 90 female students of the Kharkiv National Medical University participated in the study.

Assessment of the level of development of physical qualities and motor abilities is carried out according to the results of testing based on various tests.

Test No. 1. Raising the legs to <90 . Average indicator. Men - 4.8.

Women - 4.

Test No. 2. Sit down from a lying position in 1 minute. Men- 3.9.

Women - 3.5.

Test No. 3. From the squatting position, take the lying position.

Men - 4.8. Women - 3.8.

Test No. 4. Shuttle race 4X 9 m. Men - 3.2. Women- 2.8.

The average indicators indicate a low level physical qualities of medical students.

Determination of anthropometric indicators of medical students showed that the average body length of men is 176 cm ($S = 5$ cm), and of women - 165 cm ($S = 5.6$ cm). At the same time, the body weight is 73.3 kg ($S = 8.68$ kg) and 52.8 kg ($S = 7.60$ kg) in men and women, respectively. The calculations made it possible to establish that the average Quetelet index is 21.34 ($S = 2.11$) and 20.88 ($S = 2.87$) in men and women, respectively, which shows the harmonious development of the subjects. However, it turned out that among the examined men, 3.4% ($n=1$) were overweight and 3.4% ($n=1$) - deficiency of body weight. Among women, deviations from the norm occur much more often: 8.7% ($n=8$) of the examined have overweight, and 14.1% ($n=13$) - body weight deficiency. The study showed that the volume of the

thoracic cage (CGC) in men is 90.07 cm (S = 5.66 cm), and in women it is 85.23 cm (S = 5.24 cm).

Further research consisted in establishing the value of the adaptation potential (AP) of the circulatory system in medical students, calculated according to the method of R.M. Baevsky in the modification of A.P. Berseniv with co-authors. according to the formula [4]: $AP = 0.011 \cdot (HR) + 0.014 \cdot (AT \text{ syst}) + 0.008 \cdot (ATdShst) + 0.014 \cdot (\text{age}) + 0.009 \cdot (MH) - 0.009 \cdot (DH) - 0.27$ where HR - heart rate (beat*min⁻¹); ATsyst – systolic blood pressure (mm Hg); AT diast diastolic blood pressure (mm Hg); MT-body weight (kg); DT-body length (cm).

Table 1

Indexes	men		women	
	(n-30)	(n-90)	X	S
	X	S	X	S
age	19,86	1,73	18,9	1,00
Body weight, kg	73	8,50	52	7,50
Length sm	176	6,9	165	5,5
heart rate, strokes min	73,41	7,82	76,8	7,69

Syst JSC, mm, t.st	120,0	11,34	112,3	10,39
AT diast, mm, t.st	78,9	7,72	72,12	7,27

The evaluation of the adaptation indicator, according to which satisfactory adaptation corresponds to no more than 2.1 points, and the tension of adaptation is ascertained in the case when the value of adaptation potential is in the range from 2.11 to 3.20 points, showed a tense mechanism of adaptation in 68.0% of men and 41.3% in women.

Evaluation of students' adaptation potential. Despite a slightly higher average score for women and men, the results correspond to a low level of physical health, the increase in the proportion of girls with an average and low level of somatic health was primarily due to an increase in the number of women with a strength index corresponding to a low level of health. Study, analysis and generalization of scientific-methodical and special literature, conducting research, determining anthropometric indicators indicate the presence of deviations in the work of the main body systems of medical students, which in the future may negatively affect the professional activity of employees of medical

institutions; a number of indicators characterizing the physical development of the individual, namely the vital index, is significantly lower than the established norms, the assessment of adaptation potential showed a strained mechanism of adaptation in 69.0% of men and 41.3% of women. Establishing the level of physical health of the examinees showed a significant percentage of such students whose health level corresponds to below average and low: among men, 62.07 such were found %, and among women - 80.44%.

Conclusions: High efficiency in education of professional and applied physical qualities (PPFYA) can be achieved with the help of very diverse means of physical culture and sports.

When selecting means of physical education for the purpose of forming PPFYA, it makes sense to carry out their differentiated grouping, which will allow purposeful use of these means in the process of physical education of students of a medical university.

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