

## SPORT MEDICINE

*Lukavenko O.G., Korchevska O.G. \*, Uskova S.M. \*\**

# MICROBIOLOGICAL EFFICACY OF PHOTO-ACTIVATED DISINFECTION AND TEMPORARY ROOT OBTURATION AS AN ADJUNCT TO THE TREATMENT OF CHRONIC APICAL PERIODONTITIS

Kharkiv National Medical University, Ukraine; Kharkov National University\*, Ukraine;  
National Technical University, Ukraine\*\*

**Abstract:** Medical career is a difficult, long and controversial process that includes a variety of content and structural components. The model consists of medical professional formation including the level of physical and mental adaptation to professional activities. Training highly qualified healthcare professionals provides the harmonious development of physical, spiritual and moral, spiritual and aesthetic qualities.

**KeyWords:** development, functional state, physical training, training in sports, physical activity



## INTRODUCTION

A medical student is a future doctor and in this case the person is dedicated to medicine and should have a huge number of interrelated social features such as mind, emotions, willpower, skills, intuition, self-control, self-criticism, love, hate, passion, impulsiveness and more. These qualities can be both natural and generated while studying at the university. Any impact on a student is exerted through his personality, temperament, originality of character, skills, interests, inclinations, allowing to choose the most effective ways of interaction of the individual with the world. Medical career is a difficult, long and controversial process that includes a variety of content and structural components. It first of all depends on external conditions. With time the profession, the demands of the society to a certain profession and its ratio with other professions undergo changes.

Motivational sphere of professional activity, its mentality and spiritual values may also transform. T.K. Bugayova, exploring psychological qualities in medical students, found that while studying at Medical University their professional skills undergo significant changes, largely bringing students to the identity of a real doctor, but not always the level of these qualities corresponds to the high standards of professional activity in the field of healthcare service [1].

Aggregates of qualities determining the success of training for junior and senior students differ in the ratio of cognitive abilities and communication patterns. Undergraduate students were found to develop predominantly the qualities defining the high level of cognitive abilities with a significantly less importance of organizational and volitional qualities. Cognitive abilities also remain the key ones for graduate students, but at a much lower level. Organizational skills undergo a significant improvement with the development of communicative and ethical qualities, not inherent to junior students. The aggregate of qualities professionally important to doctors, being formed in graduates, remains unchanged though undergoes further reorganization under the influence of professional activi-

-----◆-----  
**Corresponding Author:**

*Olena Lukavenko, Department of physical rehabilitation, sports medicine with a course of physical education and health, Kharkiv National Medical University, Ukraine. E-mail: [helenluna@ukr.net](mailto:helenluna@ukr.net)*

ties.

According to M.M. Peysakhov the model of professional medical formation also involves the level of physical and mental adaptation to the professional activities. Abilities, developed to a high level up to the prediction and prognosis (perhaps even as a manifestation of intuition), self-regulation and decision-making (courage, creativity, timeliness, accuracy) becoming personal-professional qualities are of particular importance in the substructure of individual's professionalism. Professional adaptation (independence and autonomy, self-reliance and high resistance to stress, physical and emotional overload) plays an essential role. Thus, professional adaptation plays a significant role in the professional development of medical students. Today, professionals are concerned in the issues related to the impact of physical education and sport on personal development of healthcare professionals.

M.M. Bobyreva proposes to consider peculiarities of professional medical activities when elaborating the measures to increase the level of physical activity for students of medical specialties, such as the lack of muscular effort in relatively local movements and the growing requirements for emergent procession of the large amounts of sensory information and the need to perform fast psychomotor responses. The author states that specific working conditions in the field of healthcare require a rather high level of static endurance of muscles in the arms and torso, excellent coordination of hands and fingers in relative immobility of lower extremities [2,13] .

According to I.Y. Nikolaychuk, training of highly qualified healthcare professionals implies harmonious development of physical, spiritual, moral and aesthetic qualities. The author believes that the experts in medical field are required not only to receive professional training, but also to form spiritual and physical qualities, based on the high level of culture, humanism, good bedside manner, nice appearance, demeanor, which must match optimism self-discipline, cheerfulness, courage and confidence [3,8].

Thus, physical training is of utmost importance not only for preservation of the health of students, trained in medicine, but also for the professional development. In

the study of physical capacity and health of medical students, experts emphasize that improving the health of students must first use the means of physical culture and sports, aimed at increasing the development of their motor skills. However, the health impact of employment requires a certain system of organizational measures and regular monitoring of key indices of the body to establish the physical development, functional state of the cardiovascular, respiratory and autonomic nervous systems.

Despite the fact that physical qualities are an important component of physical perfection of medical students as the ideal physical development and physical fitness, training in medical schools does not contribute to the improvement of the students' health. High level of academic load exceeding 36 - 40 hours a week, its uneven distribution during the school day and week, lack of long lunch break, disordered organization of learning activities outside classroom, all of these adversely affect functional state indices in medical students.

Analyzing physical condition in higher schools students, G.V. Korobeynikov drew a conclusion that ill health triggered a delay in physical development of medical students, causing a decrease in their physical performance [4,11].

In a research performed by O.V. Shvidky graduate medical students were shown to have signs of hypodynamia, manifested by a marked decrease in physical performance of students in the learning process. According to his estimates, the key patterns of population health include poor indices to nosologic states, low health index, a large proportion of people with health problems [5, 9].

The department of physical rehabilitation, sports medicine with a course of physical education and health created suitable conditions for individual physical training under the supervision of the teachers working at the department.

- Day physical fitness classes;
- Training at public sport clubs;
- Training in sports classes established at the course or department under the supervision of teachers-coaches or student-sportsmen;

- Training in sports classes and groups of general physical training at the place of residence (in hostels);
- Mass physical, rehabilitation and recreational activities at the weekends and holidays (competitions, tournaments, sports days, sports events, etc.).

## REFERENCES

1. Bugajova T.K. Integracija lichnostnoj i professional'noj gotovnosti medikov k trudu v sisteme zdravoohranenija [Integration of personal and professional readiness of physicians to work in the health system]: avtoreferat dis.dokt.med.nauk. Moscow, 1996. 26 p.]
2. Bobyreva M.M. Sovershenstvovanie metodiki professional'no-prikladnoj fizicheskoj podgotovki studentov medicinskih vuzov [Improved methods of professionally-applied physical preparation of students of medical universities]: avtoreferat dis. ... kandidata pedagogicheskikh nauk. Almata, 2008. 37 p..
3. Nikolajchuk I. Ju. Formuvannja duhovno-fizichnih jakostej studentiv u sistemi fizichnogo vihovannja medicnogo universitetu [Formation of spiritual and physical qualities of Students in Physical Education Medical University]: avtoreferat dis. ... kandidata pedagogicheskikh nauk. Moscow, 2008. 36 p.].
4. Korabejnikov G.V., Mors'ka L.V. (2004). Osoblivosti fizichnogo rozvitku u studentiv-medikiv iz riznim rivnem zdorov'ja [Formation of spiritual and physical qualities of Students in Physical Education Medical University]. Aktual'ni problemi fizichnoï kul'turi i sportu. 2 : 95-100.
5. Shvidkij O. V. Gigienichna optimizacija navchannja i zahodi shhodo ohoroni zdorov'ja studentiv medicnih uchilishh v umovah reformovanoï osviti [Hygienic optimization training and measures to protect the health of students of medical colleges under a reformed education]: avtoreferat dis. ... kandidata medicnih nauk. Kiev, 2003: 18 p.
6. Bouchard C. (2001). Physical activity and health: introduction to the dose-response symposium. *Medicine & Science in Sports & Exercise*. 33 (6): S347-S350.
7. Dyrbye L.N., Thomas M.R., Harper W. (2009). The learning environment and medical student burnout: a multicentre study. *Medical Education*. 43(3): 274-282.
8. Ekblom-Bak E., Hellénus M-L., Ekblom B. (2010) Are we facing a new paradigm of inactivity physiology? *Br. J. Sports. Med.* 44: 834-835.
9. Hassed C., de Lisle S., Sullivan G., Pier C. (2008). Enhancing the health of medical students: outcomes of an integrated mindfulness and lifestyle program. *Adv in Health Sci Education*. 4: 540-552. doi: [http://westallen.typepad.com/idealawg/files/ahse\\_may\\_08.pdf](http://westallen.typepad.com/idealawg/files/ahse_may_08.pdf)
10. Hansen B.H., Kolle E., Dyrstad S. M. (2012) Accelerometer-determined physical activity in adults and older people. *Medicine & Science in Sports & Exercise*. 44(2): 266-272.
11. Anderson L. H., Martinson B. C., Crain A. L. (2005). Health care charges associated with physical inactivity, overweight and obesity. *Prev. Chronic Dis*. 2: 1-12.
12. Ignarro L. J., Balestrieri M. L., Napoli C. Ignarro L. (2007). J. Nutrition, physical activity and cardiovascular disease: an update. *Cardiovascular Research*. 73(2): 326-340.
13. Jacobs S.R., Dodd D.K. (2003). Student Burnout as a Function of Personality, Social Support, and Workload. *Journal of College Student Development*. 2: 23-28.

Received: 29-Mar. - 2016

Accepted: 12-June. - 2016