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Interrelation of Students' Motivation for Physical Education and Their Physical Fitness Level

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Abstract

The level of the motivational values-based attitude of the students of the Ukrainian medical educational institutions towards the physical education and the level and dynamics of the students' (men and women) physical fitness during the 1st and the 2nd years of studying are investigated in the article. The timeliness of the research is conditioned by the need to improve the efficiency of the physical education of the students of the medical educational institutions in order to improve their physical fitness, health and the efficiency of their future professional activity. The participants of the research: in order to investigate the motivation of the future doctors, a questionnaire survey was conducted among 435 students (238 men and 197 women) according to the form, which consisted of 10 questions in 2016–2017. To investigate the initial level of physical fitness, the level of the main physical qualities development was examined among 437 students of the 1st year of study (231 men and 206 women) during 5 years (2013–2017). 73 students (38 men and 35 women) took part in the research of the level and dynamics of physical fitness of the future doctors during the studying. The level of physical fitness was defined according to the next tests: 100 m race, pull-ups, push-ups (for women), 3000 m race, 2000 m race (for women), standing long jumps, sit-ups and forward inclinations of body. The methods of the research included: theoretical analysis of scientific and methodological literature, questionnaire survey, pedagogic observation, testing and methods of mathematical statistics. The low level of the students' motivation for physical education has been discovered: 47.1 % men and 50.3 % women miss 30 % or more physical education classes during the term,



mentioning that the main reason of their absence is lack of interest in the traditional classes in physical education; 57.7 % men and 42.1 % women attend classes only to pass the exam. The decrease in the level of strength and endurance development of the students of the 1st year of study is discovered in the last 5 years ($p < 0.05 - 0.001$). The absence of the increase in the level of physical fitness of male and female students during studying in the medical educational institution ($p > 0.05$) and low/below the middle levels of physical fitness of the students concerning the majority of the exercises have been discovered that means the lack of efficiency of the traditional system of physical education. Conclusions: the study concluded that the lower level of the motivation for physical training students have, the worse is the level of their physical qualities development and the physical capability during the educational and future professional activity respectively.

Keywords: educational continuity, motivation, physical education, physical fitness, students.

1. Introduction

The aim of the students' of the Ukrainian medical educational institutions physical education is training of the future specialists for the efficient labor, development of the students' need in systematic physical trainings and sport to maintain their physical and mental state depending on the peculiarities of their future professional activity, health promotion, formation of the abilities and skills in the application of various methods and means of physical education and sport in the future preventive and curative activities and formation of the health value of all social groups [1, 2]. The peculiarities of the doctors' professional activity include: irregular working hours (night and unscheduled duties); hard physical activity (hard work of the workers of ambulance, the doctors of the Ministry of Emergency Situations, family and neighborhood doctors, medical workers in the countryside, lasting many hours and exhausting surgeries carried out by the surgeons and their assistants, first aid treatment, transportation of sick or injured people); precision in movement and muscular coordination (the vital work of the anesthetists, heart and neurological surgeons, obstetricians, traumatologists, orthopedists etc.) [3, 4]. To succeed in the performance of the professional duties the future doctor should have all physical qualities developed enough, but the scientific works [2, 5, 6] prove that the most important physical quality of the future doctor's professional activity is endurance which means the low exhaustion, high capacity for work and coordination abilities. At the same time, the low level of physical fitness and health of the youth that enters higher educational institutions, lack of efficiency of the traditional physical training and other reasons do not ensure the formation of the sufficient physical preparedness of the future doctors for the professional activity [7, 8, 9] that determined the viability of the research.

2. Literature Review

The results of the scientific investigations [5, 10] emphasize the necessity of the new approaches to the education of the youth that are aimed at the implementation of the modern sanative methods in the process of physical education of the students in order to improve their health, increase the level of physical capacity and readiness for the future professional activity. The scientists [2, 9, 11, 12] mention that the level of physical development, health and physical fitness of the students from the youth of Ukraine is worsened, the majority of them have health problems and the diseases are progressing to chronic during studying in recent years. Investigating the physical fitness of the students of the Medical faculty, the scientists [1, 3] showed that 62.4 % people engaged in the research have the low and below the middle levels of the physical fitness, 21.5 % - the middle level and only 16.1 % - the higher than middle and high levels. The investigation defined the tests, which are the hardest for the medical students: push-ups for girls, forward inclinations of body for boys and endurance race for both genders [2, 3]. The analysis of the physical development of the students of the 1st - 2nd years of study of the different specialties [12, 13, 14, 15, 16] determined that 18.4 % men engaged in the investigation are overweight and 3.4 % - underweight. The women have a deviation from the norm more often: 22.7 % women engaged in the investigation are overweight and 14.1 % - underweight. The authors consider that the solution to this problem lies in the physical education of the students and the formation of their positive attitude towards physical training [14, 16].

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[17, 18] showed that 40.7 % students have the values-based attitude towards physical education formed at a low level, 30.9 % – at the middle level, 28.4 % – at a high level. Bodnar I. R., Stefanyshyn M. V., Petryshyn Y. V. emphasize that 55.3 % students are totally not interested in physical education [7]. Low motivation of the youth is reflected in the attendance of the regular classes in physical education. Griban G. P. [19] mentions that 66.7 % students attend classes in physical education by reason of the necessity to implement requirements of the curriculum in order to pass the exam. Bliznevsky A., Kudryavtsev M., Kuzmin V., Tolstopyatov I., Ionova O., Yermakova T. [20] confirm the negative dynamics of the classes attendance: 46 % students attend classes in order to pass the exam, 32 % students attend classes in order to avoid the troubles concerning missed classes. The scientists [18, 19] single out the main reasons for the students' missed classes: 26.2 % – the lack of interest; 24 % – unsatisfactory conditions in classes, 8.4 % – the lack of sports classes which they are interested in.

3. Method

3.1. Participants

435 students of the 2nd year of study of different faculties (the main department) of Bogomolets National Medical University (Kyiv) (238 men and 197 women) took part in the questionnaire survey concerning future doctors' motivation for physical education and sport. The questionnaire survey was conducted in 2016–2017. To investigate the initial level of the students' physical fitness 437 students of the 1st year of study (231 men and 206 women) were examined concerning the level of the main physical qualities development during 5 years (2013–2017). 73 students of the Dentistry faculty (38 men and 35 women) participated in the research on the level and dynamics of the future doctors' physical fitness.

The research related to human use has been complied with all the relevant national regulations and institutional policies and has followed the tenets of the World Medical Association (WMA) Declaration of Helsinki – ethical principles for medical research involving human subjects.

3.2. Materials

To investigate the future doctors' motivation for physical education and sport we created the questionnaire survey consisting of 10 questions. The initial level of physical fitness was examined concerning the results in 100 m race (speed), pull-ups (men, strength), push-ups (women, strength), 3000 m race (men, endurance), and 2000 m race (women, endurance). The examination of the physical fitness indicators during the 1st and the 2nd years of study was conducted at the sports base of Bogomolets National Medical University through the next exercises: 100 m race (speed), pull-ups (men, strength), push-ups (women, strength), 3000 m race (men, endurance), 2000 m race (women, endurance), shuttle run 4 x 9 m (dexterity), sit-ups in 1 min (power qualities of the stomach muscles), standing long jumps (speed and strength qualities), forward inclinations of body from a sitting position (flexibility). The examination was conducted according to the Regulation on the state tests and standards of evaluation of the physical fitness of the population of Ukraine. The examination was held in the first half of the day. The uniform required for the tests was a physical fitness uniform. The faculty instructors recorded the results.

The methods of the investigation: theoretical analysis of the scientific and methodological literature, questionnaire, pedagogic observation, testing and methods of mathematical statistics.

During the researches, the authenticity of the difference between the indices of students by means of Student's criterion was determined. The significance for all statistical tests was set at $p < 0.05$. All statistical analyses were performed with the SPSS software, version 21, adapted to medical and biological researches.

3.3. Procedure

The investigation of the level of the motivational values-based attitude of the students of the Ukrainian medical educational institutions towards the physical education involved the questionnaire survey. Answering the questions from the form, the students defined their attitude towards the content, organization, realization of the classes in physical education in the medical institutions, the changing of the traditional system of physical education in order to improve health, physical and mental capacity of the students, their engaging in the systematic physical training and sport. The investigation of the initial level of



physical fitness of the students of the 1st year of study was conducted in order to discover the tendency of the physical fitness level of the students entering higher educational institutions. The analysis of the dynamic of students' physical fitness during the 1st and the 2nd years of study was carried out in order to investigate Interrelation of the motivation for physical education and the level of the future doctors' physical qualities development.

4. Results

Answering the question how many hours a week they take exercises (if the regular classes take 4 hours), 40.3 % male students mentioned that they took exercise for 1–2 hours per week; 28.2 % – for 4 hours as it was planned; 8.8 % – for 4 hours as it was planned and they also did sport in their free time (usually these are the students who are engaged in various sports activities). It should be mentioned that 21.4 % students answered that they did not take any exercises (missing the regular classes). The answers of the female students had a similar tendency – the majority of the students took exercise for 1–2 hours per week (42.6 %); 24.4 % students did not take any exercises; 23.4 % students – for 4 hours as it was planned; 9.1 % for 4 hours as it was planned and they also did sport in their free time; 0.5 % students gave their own answers. The analysis of the students' answers to the question for what purpose they take exercises showed that 51.7 % men and 42.1 % women answered that they attended classes in order to pass an exam; 40.1 % women and 24.8 % men – to improve the way they look, their well-being and mood; 16.8 % men and 13.3 % women – to improve the level of physical fitness and health; 4.2 % men and 2.1 % women – to increase the mental capacity and improve the studying activities; 2.5 % both female and male students had their own opinion. It proved that not all the students consider physical education to be the means of the improvement of physical fitness, health, working capacity and results of studying. Moreover, the majority of students attended classes in order to pass an exam. Answering the question how many classes in physical education they missed the previous semester, the half of the students engaged in the questionnaire (47.1 % men and 50.3 % women) mentioned that they had missed 10 classes and more (it makes one third of all classes); 19.3 % men and 18.8 % women – from 5 to 10 classes a semester. Only 10.1 % men and 6.6 % women mentioned that they had not missed classes. Concerning the question of what the reasons for their missing classes are, the majority of the students (41.2 % men and 42.1 % women) answered that they were not interested in the classes; 22.3 % men and 20.8 % women mentioned that they had missed classes because of the laziness; 21.1 % men and 16.8 % women missed classes because they had been sick. It should be mentioned that 14.7 % women and 8.8 % men consider unsatisfactory conditions as the reason for missing classes. The analysis of the students' answers to the question of how they usually spend their free time showed that 35.7 % men and 52.3 % women spend their leisure time on computer games and social networks; 27.2 % men and 20.8 % women – with friends or family; 20.2 % men and 8.6 % women – on watching TV; and only 9.7 and 9.6 % men and women respectively take exercises (attend sport groups). The investigation of the students' answers to the question how physical exercises influence youth's health defined that 91.4 % women and 87.8 % men mentioned the positive influence; 5.5 % men and 4.6 % women considered that physical training does not influence their health and 2.5 % women mentioned the negative influence. The analysis of the questionnaire results shows that the students' answers correspond to the conclusions of many scientists [3, 5, 14, 19] concerning the positive influence of physical training on the health improvement of the students that ensures increased working capacity and efficiency of their future professional activity. Answering the question if they are satisfied with the level of their physical fitness, the majority of students of both genders mentioned that they were totally not satisfied (79 % men and 81.8 % women); 18.1 % men and 13.6 % women gave a positive answer. Some of the students (2.9 % men and 4.6 % women) could not decide. The analysis of the answers to this question shows not sufficient efficiency of the current system of physical education of higher medical educational institutions concerning the development of the students' physical qualities for the efficiency of studying. Concerning the question if they like traditional classes in physical education, 53.4 % men and 60.5 % women answered that they did not like them, 36.1 % men and 28.4 % women liked classes not fully; only 9.2 and 8.6 % men and women liked them. It proved the necessity of the improvement of the current system of physical education. Answering the question which classes in physical education are preferred for them, the majority of the students, both men (81.5 %) and women (84.8 %), mentioned the



groups of different kinds of sport according to the students' interests. Only 11.9 % and 2.5 % men, 7.6 % and 1.5 % women mentioned general or professionally-applied physical training respectively. Concerning the question which kinds of sport they would like to do in classes in physical education, the students gave the answers choosing kinds of sport from the list suggested by the department of physical education who took into account the sports base and trainer-instructors. The answers were divided as follows: the majority of the students indicated their willingness to be engaged in the sports games sections (in football - 31.5 % men, in volleyball - 32.9 % women), fitness and CrossFit (29.8 % men and 31.5 % women), badminton (14.2 % women), powerlifting and athleticism (13.5 % men) (Table 1).

