



Wiadomości Lekarskie

Czasopismo Polskiego Towarzystwa Lekarskiego



Pamięci
dra Władysława
Biegańskiego

TOM LXXII, 2019, Nr4, kwiecień

Rok założenia 1928

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PRACA ORYGINALNA
ORIGINAL ARTICLE

ANALYSIS OF THE PHYSICAL DEVELOPMENT OF YOUTH AND THE STATE OF ITS HEALTH

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ABSTRACT

Introduction: The sharp deterioration in the physical development of the younger generation is worrying. The morbidity of youth has increased by 29.9% compared with the last century. More than 33% of boys and girls, among first-year students with chronic diseases.

The aim: Assessing the state of the students' body by examining the results of a survey among the second- and third-year students of the university using a specially designed questionnaire.

Materials and methods: The material on the assessment of the state of health and the characteristics of the organism has been processed by studying the results of a survey of young men and women aged 20–23, obtained on the basis of using the developed questionnaire.

Results: Physical development has been studied in accordance with the state of health of the students, as well as a thorough study of a number of criteria: diseases of the musculoskeletal system were 37.1%, 49.7% and 43.45 among boys aged 20, 22 and 23 and respectively 33.3 %, 38.6% and 47.7% among girls in their 20s, 22s and 23s. The morbidity of eye was 18.0%, 3.8% and 9.9% among boys aged 20, 22 and 23 years and 17.7%, 17.1% and 7.7% among girls aged 20, 22 and 23 years.

Conclusions: In the structure of morbidities are diseases of the musculoskeletal system, diseases of the nervous system and the organ of vision. Correlation of the characteristics of the level of students' health and their physical development have indicators on the level of educational adaptation and the number of diseases.

KEY WORDS: health, student, physical development, morbidity

Wiad Lek 2019, 72, 4, 575-578

INTRODUCTION

The Charter of the World Health Organization (WHO) states that health is a state of complete physical, mental and social well-being. This concept has many aspects and is due to many factors, so a clear, acceptable to all definition of the concept of "health" does not exist. It is believed that health is a normal state of the body, which is characterized by optimal self-regulation, complete consistency in the functioning of all organs and systems, the balance between the body and the external environment in the absence of painful manifestations.

Indicators of physical health are the individual characteristics of the anatomical structure of the body, the perfect (normal) physiological functioning of the body in various conditions of rest, movement, environment, genetic heritage, the level of physical development of organs and body systems.

Physical development is a process of formation and changes of biological forms and functions of the human body and is assessed by the level of development of physical qualities, anthropometric and dynamometric indicators, indicators of posture formation. It is next to the birth rate, morbidity and mortality, is one of the most

important indicators. The processes of physical and sexual development reflect the general patterns of growth and development, but at the same time substantially depend on social, economic, sanitary and hygienic and other conditions, the influence of which is largely determined by the person's age.

Under the physical development is to understand biological processes which occur continuously. At each age stage, they are characterized by a certain complex of morphological, functional, biochemical, mental and other properties of the organism. A high level of physical development is combined with high levels of physical fitness and performance.

Analysis of the scientific literature shows that for Ukraine the problem, which is connected with the future of the state, is the preservation and strengthening of the health of young people. Its health is one of the main sources of power of the society as a whole. Anxiety causes a sharp deterioration in the physical development of the younger generation. The incidence of youth has increased by 29.9% compared with the last century. Among first-year students, more than 33% of boys and girls have chronic diseases. The physical development of

student youth has such negative tendencies to asthenia, reduction of the chest perimeter, lung capacity and muscle strength [1].

According to the monitoring study, it can be seen that the number of healthy young people is decreasing. So in the 2016-2017 school year, 42.7% of healthy youth were recorded, in the 2017-2018 school year, the number of practically healthy youth does not exceed 30% [2, 3, 4].

The most likely causes of this situation are environmental problems in the country, sanitary culture, reduced attention to social problems, weakening state policy in the field of preventive medicine, reducing the number of research on growth, the development of healthy young people and their health management. When a healthy lifestyle is observed, which is confirmed by the correlation analysis of its components, the efficiency of young people increases [5].

It cannot but be disturbed by the fact that the indicator of excess weight among representatives of student youth is growing every year. This indicates a lack of nutritional culture. This situation cannot but worry teachers and doctors, because young people, coming to the university, already have deviations in health. For the prevention of obesity in the organization and selection of physical culture it is necessary to take into account the physiological mechanisms and features of motor activity [6]. Therefore, the main task in the activity of pedagogical teams of educational institutions at the present stage should be the preservation and strengthening of health, the formation of positive motivation for a healthy lifestyle of the younger generation [7].

So, a healthy lifestyle helps to strengthen the social health of the individual and society as a whole. It includes values of a high order, since it is aimed at humanizing and activating human activity, improving individual personal qualities [8].

THE AIM

The aim of the study is to assess the morpho-functional state of the body of students by examining the results of a survey of boys and girls of III - IV university courses based on the use of a specially designed questionnaire.

MATERIALS AND METHODS

Material for assessing the health status and characteristics of the morpho-functional state of students aged 20-23 years was collected as a result of surveys that have been conducted using a specially designed questionnaire. Questions were proposed for processing by students, in order to obtain adequate both subjectively and objectively significant answers were clearly structured and provided an opportunity to get comprehensive answers on such problem blocks: data on a generalized assessment of living conditions of the living environment (1 block of questions), data to determine the features of social and living conditions of permanent residence of boys and girls

(2 sets of questions), data on the features of the regime for students with the obligatory consideration of the factors that can cause and A degree of mental or physical activity (3 sets of questions), data on the detailed characteristics of features of educational-relevant adaptation with the determination of the severity of general fatigue (4 blocks of questions), data on the assessment of the health status and characteristics of the morpho-functional state of the body of young men and women (5 blocks of questions). In general have been surveyed 53 students among whom were 27 boys and 26 girls.

Ethics Commission of the Poltava National Pedagogical University named after V.H.Korolenko noted that the study was carried out without violations by the students studied. The latter were fully aware of the methods and scope of research. The survey has been conducted voluntarily and anonymously in accordance with the requirements and standards, model regulations on ethics issues of the Ministry of Health of Ukraine No. 690 of September 23, 2009.

RESULTS AND DISCUSSIONS

In the course of assessing the spread of diseases with temporary disability, we found that 17.6% and 24.3% of boys and girls aged 20 years were ill more than 4 times a year, 3.3% and 17.6% of boys and girls aged 22 years and 11.0 % and 6.6% of boys and girls aged 23 years, 3 times a year – respectively 14.3% and 25.5% of 20-year-old boys and girls, 21.2% of 22-year-old boys and girls and 3.3% and 21.3% of 23-year-old boys and girls, 2 times a year – 24.3% and 15.3% of boys and girls aged 20, respectively, 15.6% and 25.5% of boys and girls aged 22 years and 23.1% and 30.5% of boys and girls aged 23 once a year – from 20.3% and 27.6% of 20-year-old boys and girls, 44.4% and 22.2% of 22-year-old boys and girls, and 41.3% and 23.1% of 23-year-old boys and girls, were not ill at all – respectively 26.6% and 10.0% of boys and girls aged 20 years, 13.3% and 16.6% of boys and girls aged 22 years and 20.0% and 16.6% of boys and girls aged 23 years.

In the structure of chronic diseases, the most common among students were diseases of the musculoskeletal system and connective tissue, namely flatfoot and poor posture, second place eye disease, among the latter, accommodation spasm and astigmatism prevailed, and in the third place girls had circulatory system diseases due to systolic noise and vegetative-vascular dystonia, young men had eating disorders and metabolic disorders due to diffuse non-toxic goiter, testicular hypoplasia and physical development. In the age group of 20 years among girls, the structure of diseases remained similar to the previous one, among young men endocrine diseases, eating disorders and metabolic disorders took the second place, diseases of the digestive organs due to functional stomach disorders and biliary tract dyskinesia took the third place.

Among the 23-year-old boys and girls, regardless of sexual differences, the first place was left for diseases of the musculoskeletal system and connective tissue, due to

flat-footedness, scoliosis and other posture disorders, the pathology of the circulatory system due to vegetative circulatory dystonia remained in the third place, eye diseases due to myopia and accommodation spasm.

The proportion of diseases of the musculoskeletal system was 37.1%, 49.7% and 43.45 among boys aged 20, 22 and 23, and respectively 33.3%, 38.6% and 47.7% among girls 20 and 22 and 23s. The incidence of eye diseases was 18.0%, 3.8% and 9.9% among boys aged 20, 22 and 23 years and 17.7%, 17.1% and 7.7% among girls aged 20, 22 and 23 years.

The proportion of persons distinguished by the presence of chronic pathology of the endocrine and digestive systems was somewhat less. Endocrine diseases, eating disorders and metabolic disorders were characteristic of 13.3% and 13.1% of 20-year-old boys and girls, 20.6% and 7.7% of 22-year-old boys and girls, 10.4% and 4.4% of 23-year-old boys and girls, diseases digestive organs – for 8.0% of boys at the age of 20, 11.3% of boys at the age of 22 years, 10.5% of boys at the age of 23 years and 7.0% of girls at the age of 23 years. The proportion of chronic diseases of the circulatory system was 8.0% and 15.8% among boys and girls aged 20 years, 4.5% and 9.3% among boys and girls aged 23 years. The proportion of chronic respiratory diseases is 11.0% and 9.3% among 20-year-old boys and girls, 7.5% and 4.8% among 22-year-old boys and girls, and 7.9% and 8.9% among 23-year-old boys and girls. The proportion of diseases of the excretory system ranged from 0% to 3.1% among boys and from 4.2% to 5.1% among girls.

The correlation components of the health status of boys and girls aged 20, 22, 23 years studying at the III-IV courses of the University showed that the indicators on the level of academic adaptation ($r = 0.52-0.71$, $p < 0.05-0.01$), the number of diseases with temporary disability ($r = 0.72-0.75$, $p < 0.001$), the presence of the frequency of recording exacerbations of chronic pathology ($r = 0.78-0.79$, $p < 0.001$), features of the nature of schooling ($r = 0.49-0.72$, $p < 0.05-0.001$) and neuro-emotional stress during the execution of daily training activities ($r = 0.52-0.68$, $p < 0.05-0.01$), general assessment of living conditions ($r = 0.62-0.73$, $p < 0.05$), peculiarities of relationships in the family ($r = 0.65-0.66$, $p < 0.01$), the duration of a night's sleep ($r = 0.52-0.67$, $p < 0.05-0.01$), the peculiarities of state of health at the end of the school day and the school week ($r = 0.55-0.77$, $p < 0.05-0.001$) as smoking ($r = 0.60-0.72$, $p < 0.05-0.001$).

When studying the mode of daily activities of the students studied, the presence of significant deviations of the leading indicators from generally accepted hygienic standards and regulations was revealed.

According to WHO data in the developed countries of Europe, in the structure of general morbidity of the adult population, the first places are: respiratory diseases (about 26%), diseases of the circulatory system (about 17%), diseases of the musculoskeletal system and connective tissue (about 12%), injuries and poisoning (about 12%), diseases of the digestive system (about 9%), diseases of the eye and its appendage apparatus (about 8%).

According to our research, diseases of the musculoskele-

tal system are three times higher than those in Europe, eye diseases are also dominated by European indicators, diseases of the digestive organs show similar results to WHO.

Most of the boys and girls identified the nature of the educational process at the university as intense or moderately tense, linking the main problems that arose with a sense of fatigue, with the level of teaching and features of the educational process and the state of their own health.

Young adulthood, between the ages of 18 and 26, is a critical period for a person.

What happens at a young age has deep and long-term implications for the future of young people.

A higher incidence rate at a young age has important implications for future health, education, and economic well-being. Rapid technological change, economic problems and a long transition to adulthood, obviously contribute to health problems in young people, increasing their stress and sedentary habits, while at the same time reducing their likelihood to participate in work and family roles, which serve as powerful social control risk perception. That is, it can be expected that these alarming trends in relation to the health of young people have to continue and worsen.

The connection between physical health and physical development has been noted by a number of authors, especially from countries with a high level of economic development, studying the effect of physical exercises on the physical development of young people [9]. Exercise has a positive effect on the risk factors for cardiovascular diseases [10]. In recent decades, there has been a rapid development of high technology, affecting the adaptive capabilities of young people. Adaptive abilities of young people leading a sedentary lifestyle decrease [11]. And it cannot but be disturbed by the fact that over the past decades a tendency of deterioration in the physical development and health of this generation of the population has occurred among the young population of the world and in our country [12]. The group of young people we study has a sedentary lifestyle, the presence of chronic diseases of various etiologies, varying degrees of severity, which affect the level of efficiency and significantly impair the quality

CONCLUSIONS

It was established that with age, the proportion of diseases characterized by the chronic course of the pathological process gradually increased. In their structure, the most common diseases of the musculoskeletal system, diseases of the nervous system and sensory organs, among the latter, violations of the functional state of vision prevailed. In the structure of morbidity with temporary disability, respiratory diseases, diseases of the digestive organs, and skin diseases significantly prevailed.

The correlation of the characteristics of the level of health and physical development of students had indicators on the level of educational adaptation, the number of diseases with temporary disability, the presence and frequency of registration of exacerbations of chronic pathology, features of the nature of education at the

university and the level of neuro-emotional stress when performing daily educational activities, features of relationships in the family, the duration of the night's sleep, the characteristics of well-being at the end of the school day and the school week, the level I am a student in such an unhealthy habit like smoking.

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The work is a fragment of the research and development project “Realization of Health Savings Technologies in Physical Education in the Conditions of European Integration of Ukraine”, state registration No. 0117U003236.

Authors' contributions:

According to the order of the Authorship.

Conflict of interest:

The Authors declare no conflict of interest.

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Received: 23.11.2018

Accepted: 14.02.2019