

## **THE REHABILITATION OF STUDENTS HEALTH**

*The health level of young people studying at different educational institutions under the educational process conditions in Ukraine, Russia, Belarus' has been analyzed. General tendencies of health state of students of the northwest to the Azov Sea regions have been systematized and their levels are studied. It has been found out that influence of unfavourable social-hygienic factors during the education period results in negative tendencies in the students health of different countries. Core factors of noncommunicable diseases rate are over-nutrition, low physical activity, neuro-emotional stress, bad habits. The health status of students of the north-western Azov regions deteriorates. In particular there are up to 45% (of total number of cases) pathologies of the cardiovascular system, up to 26% - musculoskeletal system disorder. The increase of the nation health requires modern approach based on modern health paradigm. It implies design and implementation of state integrated public rehabilitation programs providing creation of conditions for leading a healthy lifestyle. The the comprehensive rehabilitation program is proposed. It includes such components as units of diagnostic and organizational measures, informational and preventive measures, treatment and correctional activities, effectiveness evaluation of the taken actions. The program implementation will make it possible to improve the students health level, form firm healthy lifestyle motivation.*

*Key words: health, students, rehabilitation program.*

**Христова Т.Є. Реабілітація здоров'я студентів. Проаналізовано здоров'я молодих людей різних навчальних закладів у навчальному процесі в**

Україні, Росії, Білорусі. Систематизовані загальних тенденцій стану здоров'я студентів Північно-західного Приазов'я. Встановлено, що вплив несприятливих соціально гігієнічних чинників під час навчання призводить до негативних тенденцій у стані здоров'я студентської молоді різних країн. Запропонована комплексна реабілітаційна програма, яка включає такі компоненти: блок організаційно-діагностичних заходів, блок інформаційно-профілактичних заходів, блок лікувально-корекційних заходів, блок оцінки ефективності проведених заходів. Реалізація цієї програми дозволить підвищити рівень здоров'я молоді, що навчається, сформувати стійку мотивацію здорового способу життя.

**Ключові слова:** здоров'я, студенти, реабілітаційна програма.

**Христовая Т.Е. Реабилитация здоровья студентов.** Проанализирован уровень здоровья молодежи разных учебных заведений в условиях образовательного процесса Украины, России, Беларуси. Систематизированы общие тенденции состояния здоровья студентов северо-западного Приазовья. Установлено, что воздействие неблагоприятных социально-гигиенических факторов во время учебы приводит к негативным тенденциям в состоянии здоровья студенческой молодежи разных стран. Предложена комплексная реабилитационная программа, которая включает такие компоненты: блок организационно-диагностических мероприятий, блок информационно-профилактических мероприятий, блок лечебно-коррекционных мероприятий, блок оценки эффективности проведенных мероприятий. Реализация этой программы позволит повысить уровень здоровья учащейся молодежи, сформировать стойкую мотивацию здорового образа жизни.

**Ключевые слова:** здоровье, студенты, реабилитационная программа.

**Chrystovaya T.E. Rehabilitacji zdrowia studentów.** Analizowane zdrowia młodych ludzi z różnych instytucji edukacyjnych w procesie edukacyjnym w Rosji, Ukrainy, Białorusi. Usystematyzowane studentów Azowskiego północno-

*zachodniej części stanu zdrowia ogólnych tendencji. Wpływu niekorzystnych czynników społeczno higieniczne podczas studiów prowadzi do negatywnych tendencji w zdrowie młodych studentów z różnych krajów. Program kompleksowej rehabilitacji, który zawiera takie składniki: jednostki organizacyjne środki diagnostyczne, blok informacji i profilaktyki, leczenia i rehabilitacyjne działalności jednostki, jednostka oceny skuteczności działań. Realizacji tego programu będzie poprawić zdrowie młodych studentów, postaci silna motywacja do zdrowego stylu życia.*

**Słowa kluczowe:** *zdrowia, studentów, program rehabilitacji.*

**Хрыстовая Т.Е. Рэабілітацыя здароўя студэнтаў.** Прааналізаваны ўзровень здароўя моладзі розных навучальных устаноў ва ўмовах адукацыйнага працэсу Украіны, Расіі, Беларусі. Сістэматызаваны агульныя тэндэнцыі стану здароўя студэнтаў паўночна-заходняга Прыазоўя. Устаноўлена, што ўздзеянне неспрыяльных сацыяльна-гігіенічных фактараў падчас вучобы прыводзіць да негатыўных тэндэнцыям ў стане здароўя студэнтаў моладзі розных краін. Прапанаваная комплексная рэабілітацыйнай праграмы, якая ўключае такія кампаненты: блок арганізацыйна-дыягнастычных мерапрыемстваў, блок інфармацыйна-прафілактычных мерапрыемстваў, блок лячэбна-карэкцыйных мерапрыемстваў, блок ацэнкі эфектыўнасці праведзеных мерапрыемстваў. Рэалізацыя гэтай праграмы дасць магчымасць павысіць узровень здароўя вучнёўскай моладзі, сфармаваць устойлівую матывацыю здаровага ладу жыцця.

**Ключавыя словы:** *здароўе, студэнты, рэабілітацыйная праграма*

**Problem statement, analysis of last publications and experiments** The young generation health is one of today's global issues. It is integral to the human being matter, comes into existence together with a human being and modifies according to human culture motion [18]. Health is a state of complete physical, mental and social well-being, but not merely the absence of disease or infirmity.

This definition is given in the Preamble to the Constitution of the World Health Organization. One of the most important indicators of health status is the level of human body major adaptive systems functional development [3]. Health is a process of preservation and development of physiological, biological and mental functions of optimal labour and social activity within maximum duration of active creative life [5, 21].

*The maximum level of human health is the goal achievement of which should be provided to each member of the society by the modern state. However, it is not a secret that the modern system of health protection and medical science are mostly aimed at the design of the newest treatment technologies [15]. But the number of sick people doesn't decrease, on the contrary, the epidemic of chronic non-communicable diseases grows in the world moreover among the population of the most active age. These diseases are major causes of death. This situation is also observed in Ukraine and is a threat to the national security [1]. It is the youth medico-social status that will determine the quality of the labor, economic, reproductive and defense potential of the country in future.*

The Ukrainian youth health is characterized with the high incidence morbidity and prevalence of disease, disability and death. Morbidity of 17-18 years old students in the period from 2009 to 2011 increased by 1,6 times and reached 8,521.4 cases per 10,000 population. Prevalence of disease in this very period grew by 1.8 times that makes 14,900 for every 10000 young people [4].

The researchers note that study load increased, existing forms of physical education either are not applied or used inefficiently, there is widespread curtailment of the preventive direction due to lack of funding [9].

Various aspects of health of the students of different educational institutions have been subject of researchers' scrutiny [12, 14, 19]. Nevertheless nowadays there is a very small amount of comparative and generalizing works on the health status and self-preservational behavior of students of different countries. Investigation of the health status of students of the northwest to the Azov Sea

regions hasn't been carried out. These statements explain the relevance of the research topic that is related to the need of the necessity of young people health improvement in Ukraine. That is of great theoretical and practical importance.

The work is carried out according to the Melitopol State Pedagogical University named after Bohdan Khmelnytsky research work plan, the theme is: "Modern youth health-preserving technologies in an educational establishment by means of physical education and sports".

**Research objective** is to analyze the level of health status of youth in different educational institutions of Ukraine, Russia, Belarus

The following tasks were solved:

- to study literature and summarize data on students of higher education establishments of Ukraine, Russia and Belarus morbidity;
- to study levels and systematize general tendencies of health status of students of the northwest to the Azov Sea regions
- to give scientific substantiation of comprehensive rehabilitation programme.

**Methods of investigation.** Theoretico-methodological basis comprises comprehensive use of scientific principles, systematic approach that caused the choice of research methods: general scientific (analysis, synthesis, classification, generalization of scientific and methodical literature); interdisciplinary (analysis of medical records to determine diseases structure (class); empirical: survey (questionnaire "Self-Health"), methods of mathematical statistics.

**Basic material exposition.** Based on the modern health paradigm, we can say that health is a holistic multi-dimensional dynamical system having a definite structure. Health of the nation shows the level of life quality, determined by many parameters: physical, social, psychological and emotional, development of physical culture and sports.

*Recent years scientific publications analysis clearly shows that the problem of youth health is in the field of view of many scientists. For example, Russian researchers [2] point out that the prevalence of diseases of secondary specialized educational institutions students aged 15-21 makes 1445,2‰ according to consulting doctors level in 2010. In the fourth year, compared to the first, there is a veracious increase in doctor consulting level about diseases of the circulatory system by 2.4 times, the nervous system - 2.0 times, diseases of the digestive system - 1.8 times, the ear and mastoid process - 1, 5. Studying the college students cardiovascular system the authors [10, 17] found out that during the three years of study the adolescents aged 15-17 show a tendency to tachycardia, development of hypotensive reactions, a decrease in muscle performance both at rest and during exercise. This is explained by the lack of material provision, low level of knowledge and skills in organizing their life, alternation of work and rest, rational organization of the daily routine and diet.*

*Similar tendencies in health and disease are also observed among students of Belarus [7, 12]. Despite the high level of overall life quality index of the main components (social and emotional functioning, life satisfaction, health) about 30% of Belarus high educational institutions students are in the dispensary register. Such diseases as chronic gastritis, asthma, duodenal ulcer dominate. The study of the morbidity incidence of the students of the Belarusian State Medical University has shown that the first place in the structure of morbidity take diseases of the respiratory system (33,4%), second - diseases of the nervous system and sensory organs (27,4%), the third –of the genitourinary system (10,3%). The share of diseases of the digestive, musculoskeletal systems and connective tissue makes for approximately 5,0% per each.*

*It was found out [3, 6] that among university students in Ukraine the main factors contributing to the development of cardiovascular disease are over-nutrition, low physical activity, neuro-emotional stress, bad habits.*

The study of the morbidity dynamics of full-time students of Melitopol State Pedagogical University named after Bohdan Khmelnytsky (MSPU) for the last 6 years has shown that the number of young people studying PE in the main group and allowed not to attend the lessons due to medical reasons grows steadily: 2008 – 17,4 %, 2009 – 22,0 %, 2010 – 22,9 %, 2011 – 31,1 %; 2012 – 34,0 %; 2013 – 35,9 %. This increment occurs mainly due to the younger students.

The results of the study allow to state that the prevalence of diseases among MSPU students during 2008 - 2013 was 585,9 ‰. The study of morbidity patterns depending on the year of study has shown that the major part of diseases among freshmen is constituted by respiratory diseases, the second place is taken violations of the musculoskeletal system, followed by diseases of the digestive and nervous systems. Among the fifth-year students, on the contrary to first-year students, the first place is obtained by cardiovascular system diseases, the second - by violations of the musculoskeletal system, followed by excretory system diseases.

Generalized analysis of the nature of diseases among MSPU students for the last 6 years has shown that the first place is taken by the cardiovascular system pathologies: from 35 to 45% (of the total number of cases). They are followed by changes in the musculoskeletal system (violation of posture, scoliosis, flat foot) which make 20–26 %. Almost at the same level over the years are excretory system (8–12 %), eyes (6-10%) diseases. Incidence of other diseases fluctuates between 5–15 %. Morbidity incidence rises in the course of study process, and in the fourth year it is 1,4 times higher than in the first one.

The data obtained as a result of the study also indicate to the existence of negative dynamics in the health status of students of Melitopol State Pedagogical University from the first to the last year of study: 32,2% of the first year and 22,6% of the fifth year students are considered to be healthy. And if in the first year of study about one third of student suffer from chronic diseases, in the fifth year - more than one half. According to the MSPU students questionnaire their health self-assessment depends on the year of study. 56.5% of the first-year students evaluated their health as good. Unlike junior students senior ones made more

negative assessment: 38,0% of respondents evaluated their health as bad, 5,9% - as good.

Irrational daily routine, big study load, examination session stress along with such factors as poor nutrition, lack of physical activity, unhealthy habits are pointed out to be the main causes of students' bad health. Their nutrition is not considered to be rational and balanced by 51.8% of the first year students and by 68.3% of the fifth year students of MSPU in spite of the fact that lack of money was mentioned as a main obstacle of regular nutrition only by the quarter of the respondents.

The main constituents of university students recreation in their spare time are characterized by a predominance of passive forms, only 12,5% of young people do sports. However, 72,5% of students noted that almost have no free time, and 88,2% are not satisfied with the way of its spending. It should be recognized that students almost equally attributed their dissatisfaction as to the lack of money (40,3%), as to their own laziness and lack of organization (33,5%).

The major part of students (74,9%) do sports only at PE classes. Among obstacles for more frequent physical exercise 77,6% of recipients indicated lack of free time, 18,4% - laziness and lack of organization. In the study of students physical activity it was found out that doing exercises on a daily basis is practiced by 9,5% of the first year students and by 7,5% of the fifth year students. The most important feature characterizing attitude to health is having bad habits. The study of involvement into smoking has revealed that over 24,5% of students smoke.

Analysis of the smoking motives makes it possible to make a conclusion about significant contribution of psychological factors in the formation of bad habits. The majority of respondents are aware of the hazards of smoking to health (74,8%). Approximately 4/5 of all respondents (from 75,5% up to 82,0%) are going to quit smoking in future. Among the reasons of readiness to quit smoking the following were called: "health problems", "the decision to become a parent," etc. Statistically significant differences in the prevalence of smoking in the years of



study were identified: the proportion of non-smokers increases among senior students. The percentage of persons who had never tried smoking is 19,2%.

High frequency of alcoholic beverages consumption by students has been registered. Alcoholic beverages are consumed by 87,1% of the first year students and by 86,7% of the fifth-year students. In the structure of types of beverages consumed by young people beer ranks first (about half of the students indicated to the use of it). It is followed by dry wines, champagne, alcoholic cocktails (they are consumed by 47,1% of students), about a third of all respondents prefer hard liquors- vodka, cognac, fortified wines.

Analysis of the study results showed that in the contemporary socio-economic conditions students health state is one of the most acute medical and social problems. Negative trends in health status are caused mainly by the behavior not contributing to its preservation and strengthening. The authors state that only 4,5% of Ukrainian students are in the zone of safe health level. Average Ukrainian student is 5-7 years older of his/her biological age - an aging of Ukrainians phenomenon [4].

Scientific literature analysis shows that at the beginning of the XXI century the main threat to health constitute chronic noncommunicable diseases, which are major causes of adult population disability and mortality in Ukraine [1].

A superb way out was developed, theoretically proved and experimentally tested by the group of scientists [3, 8, 11], who were the first to show the functional dependence of physical activity on the health of the population. This vicious cycle can be easily broken by doing physical exercises based on age, sex, fitness, physical development and health status.

Application of the holistic approach to the problem of students health preservation helped us to work out a comprehensive rehabilitation program, that embraced the following components: the unit of organizational and diagnostic procedures (clinical, laboratory, functional diagnostics of diseases of different nosological forms), the unit of information and preventive measures (development

and implementation of system informational support of teachers and students on healthy lifestyles and safe behavior), unit of treatment and rehabilitative activities (active means of rehabilitation - physiotherapy, hydrokinesotherapy, occupational therapy, work and rest, tempering, food, sleep hygiene), the unit of evaluation of the measures effectiveness. This program will promote improvement of the students health and formation of the healthy lifestyle stable motivation.

Preventive role in this direction plays screening of the population with the identification of "at risk" groups among healthy people, formation and implementation of healthy lifestyle, improving of the environment, working and living conditions of people. However, many of these activities require significant expenditures, expensive equipment, personnel special training. At the same time, sufficient physical activity aimed at combating physical inactivity and hypokinesia, the widespread introduction of physical culture in the everyday life of the population, as it is shown by numerous medical and biological research papers [13, 16, 20], promotes human health, improves resistance of the body to a variety of environmental factors (temperature, pressure, air pollution and water, infections, etc.), as well as health conservation and restoration, prevents the development of early fatigue and overwork, promotes correction of psycho-emotional overload during professional activity.

### **Conclusions.**

1. Exposure to adverse social and hygiene factors during the study leads to negative tendencies in health of students from different countries. The main factors of students morbidity with noncommunicable diseases are over-nutrition, low physical activity, neuro-emotional overload, bad habits.

2. The health status of youth northwest of Azov regions, deteriorates. In particular, up to 45% (of the total number of diseases) constitute pathologies of the cardiovascular system, up to 26% - violation of the musculoskeletal system. By the end of training in high school, every second student obtains a chronic disease.

3. The nation's health improvement requires a modern approach based on the modern paradigm of health. It presupposes the development, adoption and implementation of comprehensive state rehabilitation programs that provide conditions for leading the healthy lifestyle: doing fitness, good nutrition, hardening, avoiding of bad habits, nature protection from pollution.

**Further research prospective.** It is planned to develop computer programs for determining the health and physical development levels of youth northwest of Azov regions and to test and implement the comprehensive program of physical rehabilitation on the basis of a systematic approach.

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