

HEALTH OF STUDENTS AND ITS DETERMINING RISK FACTORS

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Students' state of health is both a national, and a global challenge. Its relevance is increasing every year. When developing prevention programs, it's important to consider principal factors of risk for students' health. The youth is a significant group of population with students being a fundamental part of it. This article analyzes the risk factors that influence students' state of health to the greatest extent. Bad habits are given considerable attention to. A set of prevention activities must be developed for students taking into account specifics of their education. A comprehensive approach must be used to ensure the greatest effect on students' health.

Keywords: health, students, lifestyle, risk factors

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ЗДОРОВЬЕ СТУДЕНЧЕСКОЙ МОЛОДЕЖИ И ФАКТОРЫ РИСКА, ЕГО ОПРЕДЕЛЯЮЩИЕ

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Состояние здоровья студентов является проблемой не только нашей страны, но и всего мира. Актуальность ее только увеличивается из года в год. Важно учитывать основные факторы риска для здоровья обучающихся при составлении программы профилактики. Молодежь составляет значительную группу населения, фундаментальной частью которой являются именно студенты. В данной статье проведен анализ наиболее влияющих на состояние здоровья студенческой молодежи факторов риска. Большое внимание уделено вредным привычкам. Для обучающихся должны разрабатываться комплексы профилактических мероприятий согласно специфике их обучения. Необходимо использовать всесторонний подход для наибольшего эффекта для здоровья студенческой молодежи.

Ключевые слова: здоровье, студенты, образ жизни, факторы риска

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Around 70% of non-infectious diseases such as cancer, cardiovascular diseases, diabetes mellitus, obesity, etc. are somehow associated with a human behavior and lifestyle. They constitute the main causes of premature death. Their prevalence is especially high in developing and developed countries, which is the most important problem to date [1].

Students are the future of our country. Life and further destiny of our nation depend on them. Students' morbidity is a pressing problem of the modern society through challenging times. Students of Universities belong to the future potential of our country. They constitute a greater part of young population of Russia, and will rule the world soon [2].

Requirements for preparation of future medical students are increasing every year. In future, this can lead to their overburden and — finally — to a decreased level of aid provided to the population [3]. It is believed that doctors without bad habits more frequently discuss the issue with their patients and motivate them for a healthy way of life. Recommendations of these doctors are perceived as more reliable ones. Bad health of doctors produces a negative effect on work performance, efficiency and quality of patient care [4].

Numerous works deal with the issue of health of medical students by widely using the questionnaire method. However, the topic should be examined in a comprehensive manner. Inadequate attention is given to the indicators of students' physical development and effect produced on them by conditions of an educational process [3].

Health of today's students is closely associated with their psychoemotional condition and state of the nervous system. A sharp increase in load has been occurred recently due to introduced computer aided teaching, significantly changed educational programs, ultimately leading to chronic fatigue of students and decrease of their activity during a day. Specific character of long-distance learning left a mark on students' way of life. Physical activity of medical students and time spent by them in the fresh air was reduced. Time spent by students on the phones or computers was increased [5].

Currently students experience difficulties while studying. It's difficult to eat well and on time, as it takes much time to study at a medical university. Work and rest schedule is not followed, physical activity is low. These are all risk factors of ill health for a young and weak body which is especially vulnerable during university days.

Students get into a totally new and unknown environment, a higher educational institution, which is totally different from school to which they have got so used in eleven years [6].

Today, it is difficult to compare health researches of medical students around the country, as in different regions, medicine can vary by structure and composition. That's why it's important to conduct researches in all regions of the country and develop a set of highly individualized prevention activities depending on the results obtained in a certain region [7]. It is necessary to develop a complex approach to the study of students' morbidity, strive for an extensive testing and establishing of causative relationships between various diseases.

Development of health in adolescents starts at school. The prevalence of morbidity among students is significantly increased from the first year of education. Students of the first and subsequent years of education should be provided with health education, their health awareness must be improved, they should be given an opportunity to participate in different activities of health promotion, and lead a healthy lifestyle to prevent diseases. The greatest awareness of a healthy lifestyle is commonly typical of senior students, whereas junior students know the least of it [8].

Availability of outpatient clinics in the regions of Russia is a pressing matter. Some cities have already transferred students to community-based medical institutions increasing the load on the entire medical personnel and decreasing the quality of medical aid provided both to students, and other citizens. Many students can't afford commercial services and costly methods of examination due to their high cost [9].

A number of students from preparatory or special health groups is increased every year. The trend is true both among medical, and other students. A number of the first-year students who enter universities with various diseases has increased as well. An obvious growth which is probably associated with an increased academic load is found among senior students [10].

A significant quantity of health abnormalities during medical examinations, a growth of chronic disorders, premorbid states and physical weakness are found among applicants and students on the annual basis. The figures are steadily on the rise with every passing year [11]. Not all the universities in our country pay much attention to an annual physical exam to detect diseases both among applicants, and students. It is always easier to cure a disease at an early stage as a late stage requires spending more strength and capabilities.

Closely interrelated theoretical and practical training belongs to the unique feature of education at medical universities. A certain impression is left by a great number of clinical sites where medical students are educated. Time spent on travelling is increased. Communication with patients and staying in the hospital setting decrease body defenses and figures result in the risk of infectious diseases. Negative emotions experienced by students while obtaining clinical knowledge and feeling compassion for patients, their pain and sufferings have an impact as well [12].

It is not right to develop prevention activities aimed at improvement of health in students without paying attention to a complex hygienic assessment of educational conditions and other important constituents. Every constituent must be taken into account to develop complex preventive activities and substantiate them [13].

Priority factors for future self-fulfillment of the youth include health and healthy lifestyle (HLS) [14]. HLS is a human lifestyle aimed to preserve health and decrease the risk of a non-infectious disease. It is based on the control of behavioral risk factors. Development and implementation of a set of activities targeted at promotion of a healthy lifestyle in young people, including students, belong to a basic direction [15].

A number of healthy students is decreased every year; at the same time, a number of students with various diseases is increased. People, including students, have been lately leading an inactive lifestyle, which can result in certain diseases [14]. The majority of students from the Chelyabinsk State University (72.3%) don't do exercises in the morning. The main reasons are lack of time or laziness. 3 to 5% of those requested believe they don't need it [16]. Things are a little better among medical students of the Orel State University, as only 27% and 64% of them did morning gymnastics always or

sometimes, respectively. It should be noted that hypodynamia is a current global challenge not just for students, but also for the entire population of our country, and the world [17]. Thus, conversations about the benefit of morning exercises and increased level of physical activity within a day are beneficial for medical, and other students.

One of the top priority tasks for any university is to strengthen and preserve health of its students. Professional abilities and skills depend on the health of future specialists. Promotion of a healthy lifestyle among medical students could build a layer of healthy doctors who — in their turn — would probably conduct preventive counselling. Patients would listen more to those doctors who lead a healthy lifestyle and have no bad habits [18].

Nowadays, students face a big challenge associated with financial support, as scholarships are commonly small. They have to reconcile educational tasks and practical work, which leads to an increased load and violated rest and labor regimen. The consequence can include low performance, less sleep, and risk of various diseases sooner or later [6]. Working at nights can influence performance and anxiety of medical students, violate their rest and labor regimen and produce an effect on students' health and life quality.

The most pressing problem is that every next generation is less healthy than the previous one. It happens due to numerous factors. According to the leading specialists, a lifestyle (50–60%) is one of the most important health factors. Time spent by students at educational institutions is both an important and complicated period of their life. Biological growth and changes in social roles and behavior produce an effect on students' health [19].

Students, and especially medical students, often have different disorders and diseases of the nervous system. All previously described risk factors result in stress, depression, anxiety, etc., especially during tests and exams. By the 4th year of education, students consult a neurologist twice as often [19]. It is difficult for former schoolchildren to adjust to the specific nature of education at universities. Students who already feel severe stress and increased anxiety because of a new and unfamiliar place of education and many new people and teachers who differ from school teachers, undergo through significant alterations [20]. So, students who shift from childhood to adulthood, must be instructed to prevent the diseases associated with the lifestyle.

It's necessary to take into account the living conditions of non-resident students who stay alone, especially at residence halls, as they spend much time there, do homework and sleep. It is necessary to take responsibility in building comfortable conditions to restore performance and prevent various diseases. Not all non-resident students can afford to rent an apartment or stay with their relatives or friends and have to stay at residence halls. Unfortunately, requirements to residence halls are not followed in many cases [21].

University management needs to pay attention to how the training agenda is composed. Busy workload often found in the beginning or at the end of the week, a great number of double classes during the same day, and several complex disciplines in sequence result in impaired productivity of students no matter of their year of education [22].

It is important to follow hygienic requirements for classrooms. They are not always given enough attention to. It results in consequences that influence the health indicators of students, teachers and other employees of educational institutions. In spite of proper technical capacity at the Novosibirsk State Medical University, numerous sanitary requirements are not

followed. 3 points out of 10 were assigned to welfare by over than 50% of students [23].

Medical students often (in 65% of cases) have different chronic diseases. Digestive diseases which account for about 25% belong to the most common ones. This shows again that students are malnourished, skip a meal or two, and sometimes don't eat properly due to an uncomfortable schedule or short intervals between classes [24]. The food is often far from being diversified or contains little nutrients. Only 65% of students eat regularly, while 35% take food less than 3 times a day [25]. According to various data, over 50% of medical students have violated regimen of food intake, as they eat not regularly or inadequately. This is especially true for those students who stay without parents.

Lack of full breakfast or eating twice a day are widely found as well. Practical and theoretical facilities are located far from one another, and students spend much time trying to reach them and often miss their meals [26].

The problem of obesity and underweight is currently pressing both in our country, and abroad. Students are not the exception. Many researches show that not all the students are worried about their body mass. It is proven that obesity is a risk factor for many diseases such as diabetes mellitus, cardiovascular diseases, etc. Malnutrition and unhealthy nutrition increase the risk of obesity. Poor or bad quality sleep is another risk factor. About 10% of the total number of students suffer from obesity, whereas every seventh student is classified as underweight. As a rule, underweight or obese students are less aware of health problems [27]. It is necessary to develop healthcare programmed that could include physical activity and nutrition.

Many obese students try to lose their weight. According to China-based researches, various laxatives taken without a doctor's prescription or on purpose triggered vomiting. It produced a negative effect on student's health. The high incidence of diets is of great concern as it subsequently results in eating disorders and increases the risk of digestive diseases [28]. The majority of students don't follow nutritional recommendations. According to the research conducted in Jordan, around half of students consume fast food once a week or even more often, 76% of those reviewed don't follow recommendations on daily fruit consumption, whereas 82% don't take vegetables in recommended amounts [29].

Every year requirements for medical workers are increased. Much information needs to be examined. There is a variety of new domestic and foreign developments, competition among specialists which is getting higher every year. It makes life of medical students difficult decreasing the amount of sleep and rest required to restore their health. The adaptation potential is depleted, the defense is reduced, thus, leading to pre-existing conditions and different diseases [30].

Medical students should be taught to lead a healthy lifestyle as soon as possible. In spite of specific knowledge obtained, health of students is deteriorated by the last years of education. Considering the working load and emotional stress associated with the chosen profession, the academic program of the medical university needs to supply students with instruments and skills preserving health habits during their entire professional life, and protect them from work-associated health risks. The efforts will enable better work of the healthcare system, and doctors can become true examples for their patients [31].

Medical students in Russia, and the entire world frequently complain of sleep disturbances and headaches. In its turn, this results in decreased life quality, reduced efficiency of future doctors and risk of various diseases. Almost every

student used to have headaches due to fatigue or some other reason [32].

With regard to health, adaptation potential of students needs to be considered. It should be noted that the lowest adaptation abilities are found in the first-year students leaving a mark on their quality of life and health. The first year is the most complex and demanding as far as adaptation to new educational conditions goes. This should be taken into consideration when schedules and educational programs are developed [33].

The cultural constituent of student-age population has been significantly decreased lately. High incidence of bad habits is detrimental to the health of future doctors. Measures taken at the federal level and at the universities produce no significant changes. The issue must be solved in complex with participation of educational and medical institutions [7]. According to many authors, bad habits influence achievements, and not for the better. Disappointing results are obtained in those drinking alcohol, smoking and using drugs. An increased interest to psychoactive substances has been found lately as compared with the last year. There is a high prevalence of hookahs, the harm of which is often disregarded [34]. The World Health Organization has set a task to decrease a harmful intake of alcoholic beverages by 10% by 2025. New university programs must be developed or old health-improving programs must be improved to unite all bad habits and show the students how they influence their immature organisms. Alcohol consumption is very dangerous for those around as well. A number of road traffic accidents involving alcohol-impaired drivers is increased. Unfortunately, not all these accidents have a happy ending [35].

Smoking has been a huge problem lately among students both in Russia, and globally. Almost every fourth medical student is a smoker. Hookahs and e-cigarette smoking is widely spread today. Its harm is always disregarded by students as the issue is not well concerned [36]. There is a significant difference between health of smoking medical students and those who don't smoke. Health improving programs oriented to behavior of students strengthening their health and promoting a healthy lifestyle need to be developed. It is also important to develop smoking refusal programs for medical students as they are future doctors. It will be difficult for a specialist who sets a bad example to convince a patient to refuse from the bad habit [37].

Alcohol consumption is currently a leading bad habit among students, and other groups of population. Previous studies state that about 70% of students consume moderate amounts of alcoholic beverages, whereas only 14% don't drink at all [38]. Around 11% of requested medical students have abusive drinking behavior. It should be noted that at other medical universities it's even worse [39]. For instance, researches of Romanian students show that alcohol consumption is slightly higher there (about 80%). Irrespective of the year of education, the majority of students take alcohol on a monthly basis. The effect of alcoholic beverages on sleep should be noted. Students who misused alcohol could have inadequate quantity of sleep of bad quality. It is also stressed that the more beverages were consumed, the less the students slept [40].

Nowadays, when many people have different bad habits, low physical activity and fail to conduct a healthy way of life, it is important to foster a reverential attitude to health among medical students, teach them to conduct preventive conversations and advocate a healthy lifestyle for future patients. This will contribute to recovery of the country, as many people don't know how a healthy lifestyle can be led [41]. In Russia, preventive medicine is just on the way of development, and competent staff needs to be prepared.

Self-estimation of health should be considered as well. It means that students assess their state of health by their own. The indicator is most commonly objective, as those examined are more familiar with features, well-being and life quality of their bodies. Health self-estimation is usually higher for those students who have breakfast in the morning, do morning exercises, have higher physical activity and pay enough attention to studying. It means that good habits are important factors for health self-estimation. At the same time, students with bad habits had a higher level of stress and estimated it in a slightly worse way [42].

It is important to consider dependence of health on mental condition of students. Mental disturbances influence performance and physical health. Many global researches show that the majority of mental illnesses start in university. It is noted that stressed or depressed students are more prone to alcohol consumption and other bad habits [43]. Medical students — especially junior students — often complain of emotional burnout, depression and anxiety. 41% of first-year students reported depression symptoms, 28% had symptoms of depression, 4% said they had suicidal thoughts. It means that psychological service needs to be available in any college. All applicants entering educational institutions need a compulsory health check and treatment if necessary [44].

Many factors such as culture, religion, social and economic status, and beliefs influence a human lifestyle. They are all developed at school and in university. The management of educational institutions faces an important task of establishing strong convictions and knowledge about human health, way and quality of life, which are closely related to their well-being [45].

Academic achievement is also influenced by commitment to a healthy way of life, high physical activity of students and participation of parents in the educational process. This stresses the necessity to develop a complex approach to leading a healthy way of life, as it can improve the quality of life, knowledge about students' health and academic achievements [45].

A great number of global researches are currently devoted to the issue of bad sleep among students. It leads to various pathologies, including nervous system disorders, performance degradation, midday sleepiness and reduced attention. It influences progress of students as it is difficult to study when there is not enough sleep. Researches in the USA have shown that 27% reported poor sleep quality, 36% said that they were sleeping less than 7 hours per day, and 43% reported that they required over 30 minutes to fall asleep at least once a week. It is also noted that symptoms of depression and anxiety are associated with insufficient sleep of bad quality [46]. In our country, the results are comparable with those found globally. About 29% of students complained of at least one sleep disturbance. Initial insomnia developed in 51.8% of students was the most prevalent disturbance [47]. Medical students have a large academic load that can worsen the quality of sleep even more than it is observed in the modern world. Prevalence of sleep disturbance is higher in medical students as compared with other students and population in general. Long-term and highly intensive education, clinical disciplines, emotional constituents, etc. explain why the problem is so popular among medical students.

CONCLUSIONS

Thus, the issue of students' health has always been pressing not just in our country but also globally. Unhealthy lifestyle and behavior play a vital role in development of many non-infectious diseases. University students of the future will take decisions at the level of institutions, communities and countries. Considering the importance of their health, health-promoting lifestyle of students should become a priority area for politicians and medical workers by way of giving services at a high level and aimed at helping the students to lead a healthy lifestyle.

Medical students are future specialists in healthcare. Thus, they can take better care of others when they improve their health, lifestyle and achieve the highest level of their own well-being.

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