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Risk Factors for Degrading Health State of Students

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Abstract Human health is formed at each stage of life. The most important stages of the life cycle are universally recognized as the period of childhood, adolescence and youth, during which patterns of behavior are formed that predetermine not only the state of current health, but also health indicators in the future. Therefore, one of the priority areas for the implementation of social policy in many states is the protection of the health of young people in general and students in particular, and research in this direction is always relevant, since each region has its own characteristics and factors that have a corresponding impact on the health of young people, including student In the article the main problems in the health of students are described, saving and destructive to health factors, the attitude of young people themselves to their health, issues of developing a healthy lifestyle.

Keywords Health, Student youth, Risk factors, Morbidity, Healthy lifestyle, Bad habits

1. Introduction

The health of young people in general and students in particular, its condition and protection is one of the priority areas for the implementation of social policy in many states. In modern Uzbekistan, the age group of the population from birth to 30 years old makes up 60% of the population, therefore one of the goals of the " Development Strategy of the New Uzbekistan for 2022 - 2026" is designated as protecting the life and health of young people, and improving the level and quality of treatment and preventive care provided to them assistance, increasing the medical activity of students based on increasing their medical literacy and promoting a healthy lifestyle among young people [1].

2. Purpose of the Study

Based on literary sources, conduct a comparative analysis of the health status of young people, in particular students, and identify significant risk factors that worsen it in different countries.

3. Material and Research Methods

To analyze the health status and risk factors for the development of morbidity among students in the modern world, about 100 literary sources were studied. Historical and analytical research methods were used.

Search in databases. The review focused on comprehensive searches of major databases including PubMed, EBSCO, Web of Science, Science Direct, and CyberLeninka.

Search terms: a combination of keywords was used, such as "health", "lifestyle", "students", "bad habits", "poor nutrition", "physical inactivity", "drug addiction", "morbidity", "mental health". To refine the search, logical operators (AND, OR) were used.

Time frame: Studies published between 2000 and 2023 were considered and included current information.

4. Research Results

Students are a special group, which is characterized by specific conditions associated with study and student life. Significant mental, psycho-emotional stress and the need to adapt to new learning and living conditions increase the risk of developing various diseases among students. Considering the above, problems related to the health of students become more significant from year to year and do not lose their relevance, due to the numerous factors that shape it. Therefore, the student's health state must be considered not as an abstract state of complete physical, mental and social well-being, but as a means and resource that allows a person to lead a productive and high-quality life [2,3].

Researchers divide the complex of factors that affect students into social-hygienic, medical-biological and psychological. These factors include violation of the daily and rest regime, often irregular educational process, with certain violations of hygienic requirements, violation of the regime and quality of nutrition, the presence of bad habits, physical inactivity, parallel work activity, unfavorable psychological climate in the team and family, starting a family, lack of interpersonal communication skills [4,5].

The main indicators characterizing the health of the population, including students, are indicators of morbidity,

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mortality, disability and physical development.

The structure of morbidity among students is heterogeneous in different universities and countries, and also changes over time and the course of study. So N.L. Lystsova (2014), who conducted a study of the health of 250 students The Institute of Biology of Tyumen State University found that among the surveyed there was not only a high level of prevalence of chronic nonspecific diseases (CNDs). Moreover, if the structure of morbidity among first-year students was dominated by diseases of the nervous system, and among senior students, diseases of the digestive system, which may, in the author's opinion, indicate not only factors of malnutrition, but also a breakdown of the immune-adaptive systems as a result of nervous overstrain and lifestyle [6].

In general, characterizing the health of students P. V. Glybochko et al. (2017) found that among chronic diseases, respiratory diseases traditionally rank first (18%), followed by diseases of the musculoskeletal system (15.1%), visual impairment, digestive diseases and diseases are in third place. nervous system (11.7%), in fourth place are diseases of the endocrine system and metabolism (8.8%) [4].

Considering the prevalence of respiratory diseases among students, a number of authors state the high prevalence of respiratory infections 17.7–21.2%, allergic rhinitis - 22–32.6%. Asthma-like diseases are also quite common in this environment - 21-25% [2,7,8]. Often these diseases are associated with exposure to cold and damp rooms with signs of mold. Often these factors are among the characteristics of low-cost housing and student dormitories rented by students.

According to some data, disorders of the musculoskeletal system occur in every second student. A study of these diseases among students of Altai State University showed that their number has increased over the period from 2012-2015. from 56.6 to 66.9%. The most common postural disorders among students were 23.8 – 28.5%; deformities of legs and feet 8.7 -9.3%; spinal osteochondrosis 6.1 - 6.5% [9]. Moreover, these changes are characteristic already at the stage of admission to a higher educational institution and progress during training due to the need for long-term static postures during classes. Disorders of the musculoskeletal system lead to deterioration of depressive symptoms, aggravated during the exam period, which are more often observed in girls than in boys [10].

Long and persistent studies cause persistent changes in the organs of vision in high school students and students. The increase in the share of refractive pathology in the structure of eye diseases in children and youth is associated with an increase in visual load with global computerization and non-compliance with hygienic guidelines and requirements [11,12,13,14].

Diseases associated with disorders of eating behavior, metabolism, metabolism and the endocrine system have always been widespread among students. Their development among students is largely associated with common among young people: stress [15], low level of socio-economic well-being [16], physical inactivity [17] and dietary disorders. Thus, only a limited number of students (15.3%) of various nationalities follow the basics of rational nutrition and dietary recommendations. Even medical university students, who are quite well informed about the basics of rational nutrition, adhere to only 33% of all students surveyed, and every second does not follow these rules. Similar data were obtained in a survey of medical students of the Republic of Uzbekistan: 38% of them do not adhere to the basics of rational nutrition [18].

Among the students interviewed in the work of O.V. Sazonova et al. (2020) There was an increased consumption of fast food and drinks with sugar and carbonation to the detriment of the consumption of fish, fruits and vegetables [19]. In addition, students often violate the frequency of meals, since they do not always have the opportunity to eat at a convenient time. This is primarily due to class schedules and lack of parental control. According to M. Zarzeczna-Baran (2007), in a group of students at a medical university in Warsaw, only 59.7% of female students and 62.9% of male students ate 3 times a day, and the rest ate less than 3 times a day [20].

Violations in the nature of food intake in combination with educational and psychological stress lead to the development of gastrointestinal diseases. It is these diseases that traditionally occupy one of the leading places in the structure of student morbidity, occupying 25-60% [21]. It should be noted that almost every third (29.4%) of the students have a history of diagnosed chronic gastritis, while 15.2% of respondents were diagnosed at school; the difficulties of student life led to the fact that 54.6% Of the patients, the diagnosis was made already in the 1st-3rd courses, and every fifth (21.2%) was diagnosed in the 4th-6th course. It should be noted that students do not always consult a doctor for a diagnosis. Although almost all of the respondents noted certain symptoms of gastrointestinal tract damage (87.1%), among them: a feeling of heaviness in the epigastric region was noted by 20% of respondents, belching and an unpleasant taste in the mouth by 16.5%, nausea was noted by 10.6%, and heartburn occurs in almost every fourth (23.5%) of all surveyed 1st to 6th year students [18].

Another manifestation of nutritional disorders is underweight or excess body weight, with obesity currently prevailing over the prevalence of thinness. It has been proven that obesity increases the risk of developing various types of chronic non-communicable diseases. These health problems occur in people living with obesity, in part because adipose tissue is a metabolically active endocrine organ in which fat cells (adipocytes) secrete and receive hormones. Adipocytes release substances called adipocytokines; they are associated with a range of systemic or local influences, including glucose and lipid metabolism, cell development, inflammation and oxidative stress, which lead to a range of health problems [22]. Prevalence of obesity among boys under 19 years of age for the period 1975-2016. increased almost threefold, among girls of the same age twice over the same period [23].

According to research carried out by Mitic N. et al (2021)

among 3072 students in the European region aged 19 - 23 years showed that overall, one in five (20%) in the study population was overweight or obese, and among young men (31.4%) this percentage was higher than among girls (28.1%). After stratification by sex, there was a significant difference in the prevalence of overweight/obesity between the rates of general obesity (21.3%) and abdominal obesity (11.7%) [24].

According to B.B. Rakhimov in the period from 2012-2014. in Uzbekistan, more than 17 thousand newly identified cases of obesity were recorded, or from 0.9 to 119.3% $_0$ in different regions among people over 18 years of age, and among people under 18 years of age in 2012 - 2014 this figure was 34 and 32.2 per 1000 population of a given age, respectively [25].

Changes in the circulatory system are also quite common among students, which are also often associated with negative psychological stress and metabolic disorders. Thus, signs of arterial hypertension (AH) are observed in 13.7 - 14.7% of students. In this case, the average level of systolic pressure can reach 132.5±0.7 mm. rt. column, and diastolic 77.0±1.47 mm. rt. column, with a heart rate of 87.0±2.2 [26]. The high level of prevalence of pre-diseases of the circulatory system among students under 30 years of age is also evidenced by the study of N.S. Gooding (2017), according to the results of which in the population with a mean age of 24.8 ± 3.6, almost one in ten (8.7%) had at least one clinical risk factor for the development and progression of atherosclerotic cardiovascular diseases (hypertension, hyperlipidemia, or type 1 and 2 diabetes) [27].

Another factor contributing to the growth of all types of morbidity among students is negative habits - smoking, drinking alcohol and drugs of varying severity. Undoubtedly, preventive measures carried out in many countries of the world to combat smoking, drunkenness and drug addiction have borne fruit and have somewhat reduced the intensity of this problem among young people, but among students these phenomena are still quite common [28,29,30,31].

The prevalence of tobacco smoking and alcohol abuse according to A. Terebessy (2016) among medical students was 18.6% and 13.8%, respectively. Moreover, the level of these indicators varied depending on the nationality of the students. Thus, smoking was most common among students from Mediterranean countries (Italy, Greece) - 30.4% of the number of smokers, and least among Scandinavian students - 12.4%, but the largest number of people who abused alcohol was noted among Scandinavian students 32%, in second place were students from the Mediterranean 18.5%. Students from Iran consumed the least amount of alcohol and tobacco products: 16.7% and 8.6%, respectively [32]. By data research La Torre G. (2019) study in Europe among 2249 medical students, the overall prevalence of smoking was even higher at 29.3% (CI 28.1-34.7, p = 95.5%), with this prevalence ranging from 28% in Germany up to 31.3% in Italy [33].

Data on the prevalence of tobacco smoking among medical students in the Russian Federation indicate not only that this phenomenon is more widespread (25-50% according to various sources), but also that this habit is spreading among non-smokers during their studies. So, according to V.A. Strizheva (2014) if in the first year of a medical university only 17.4% of students smoked, then in the fifth year their number doubled to 32.7%. The intensity of smoking also increases, if in the first year 12.7% of smoking students smoke from 8 to 10 cigarettes, then by the 5th year the number of students smoking up to 20 cigarettes per day increases (13.5%) [34].

According to WHO, in 2022 in Uzbekistan, among men aged 18-29 years, smoked forms of tobacco were smoked - 9.3% (4.1–14.6 confidence interval at $p < 0.05$) of men and 0.3% (0.01–0.8 confidence interval at $p < 0.05$) women. It should be noted that smoking chewing tobacco (nasvay) is also common in Uzbekistan, which is used at the age of 18-29 years - 6.8% (2.5–11.0 confidence interval at $p <0.05$) of men and 0% of women [35].

Alcohol use is a major public health problem worldwide, especially among young people, including students. Students often experience higher levels of distress, which may lead to a higher prevalence of substance use and psychiatric comorbidities. Alcohol abuse may be one of the detrimental methods of coping with distress [36,37,38].

According to a study conducted at Irkutsk State Medical University (Russia), more than half of students (58.1% of boys and 62.7% of girls) drink alcoholic beverages. At the same time, 96% of boys and 36.2% of girls can drink strong alcoholic drinks. By type of alcoholic beverages, the leading place among male students is beer (84%), among female students - wine (74.5%) [39].

In Uzbekistan, according to WHO, in 2022, among men aged 18-29 years, 18.6% drank alcohol during the last year and 10.6% of women. Among them, 65.9% drink alcohol less than once a month, 18.7% from 1 to 3 times a month, 8.2% up to 2 times in one week and 1.3% almost daily [35].

According to EE Ayala (2017) Almost all (91.3%) medical students in the United States drink alcohol, and almost a third of them (26.2%) use marijuana. Every third student (33.8%) drinks more than five drinks in one sitting in two weeks. Moreover, the use of alcohol and tobacco is sometimes accompanied by the use of marijuana. Thus, 7.6% of medical students admitted to simultaneous use of marijuana and tobacco; 16% of medical students said that they would prefer drugs rather than alcohol to be available at parties. The study proved that young men from a medical university, as a rule, consume significantly more alcohol than their peers from other educational institutions. According to the author, the natural consequences of the use of psychotropic substances were short-term memory loss in 22.3% of respondents, thoughts of suicide in 5.8%, unseemly actions that caused regret in 24.1%, quarrels and fights in 18.9%, driving while intoxicated more than 10% of respondents [40]. Among medical students in Poland, 30.9% abused alcohol. The authors point out male gender and cigarette smoking as the main risk factors for alcohol abuse [41].

The next important factor that has a negative impact on the

health of students is excessive time spent at the computer and gadgets. According to a number of researchers, up to 93% of respondents from among the students surveyed spend from 3 to 5 hours on ordinary days and 5-8 hours on holidays on electronic media (including both studying and recreation) [42]. Based on a survey of more than 500 students, M. Benden et al. (2021), students most commonly use smartphones (64.0%), laptops and tablets (53.2%), and desktop computers (46.4%). The average daily use of gadgets exceeds 4.4 hours per day. It should be noted that this not only increases the level of physical inactivity among students, but also leads to static and uncomfortable postures, since most often young people used these devices mainly on a sofa or on a chair without a table. This circumstance plays a negative role in the impact on the organ of vision, the musculoskeletal system, the development of obesity and, as a consequence, metabolic syndrome [43,44,45,46,47].

A number of researchers have noted that under the influence of the above factors in secondary and higher educational institutions, students experience hidden or obvious psychological health disorders. These disorders are expressed in a state of depression, anxiety, rigidity and depression [48,49,50].

The main reasons for their development among students are a state of dissatisfaction with life that arises against the backdrop of difficult material and living conditions, separation from family that occurs when entering an educational institution and moving to another place of residence, fear of bad grades, instability of life situation, stigmatization, computer and Internet addiction, use of drugs, alcohol and other psychotropic substances [51,52,53].

It should be noted that among medical students the level of depression, depression and suicidal thoughts is much higher than among students at other universities, and these disorders were more pronounced in girls during clinical practice. In addition, medical students and nurses involved in public health often experience depression and anxiety as a result of the fear of making mistakes that could lead to harm to patients [54,55,56,57,58].

Thus, the health of students, as part of the most purposeful and active youth, largely determines the health of the nation and its economic potential. Studying at a university is a factor influencing the health of students. The analysis of research materials by many authors indicates the presence of various factors affecting students during their learning process and contributing to the deterioration of their health. The health status of students deteriorates over time according to the increase in the impact of certain factors on their body. Throughout the entire period of study at the university, there is a high incidence of illness among students. The leading place among diseases among students is occupied by pathology of the organ of vision. Persistent disorders of the musculoskeletal system, vegetative-vascular disorders and diseases of the digestive system are identified. It should be noted that when characterizing a student's lifestyle from the perspective of "health - ill health", it is a healthy lifestyle that is correct, based on positive life experience and a health-preserving reserve. Consequently, identifying health-damaging factors in students factors necessary for timely correction of health status. If the task of the state, which guards the health of its population, is to fully develop its healthy lifestyle. The tasks of teachers are to form a developed, deformation-resistant consciousness and worldview of young people, as well as to fully strengthen their physical and psychophysical health.

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