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PRACA ORYGINALNA
ORIGINAL ARTICLE

PREVALENCE OF BAD HABITS AMONG STUDENTS OF THE INSTITUTIONS OF HIGHER MEDICAL EDUCATION AND WAYS OF COUNTERACTION

WYSTĘPOWANIE ZŁYCH NAWYKÓW WŚRÓD STUDENTÓW UCZELNI WYŻSZYCH ORAZ METODY ZAPOBIEGANIA

Tetiana S. Gruzieva¹, Liudmyla I. Galiienko¹, Iryna A. Holovanova², Victoria B. Zamkevich¹, Olena Ya. Antonyuk¹, Liudmyla V. Konovalova¹, Roman G. Dolynskij¹, Anastasiia I. Zshyvotovska²

¹NATIONAL BOGOMOLETS MEDICAL UNIVERSITY, KYIV, UKRAINE

²UKRAINIAN MEDICAL STOMATOLOGICAL ACADEMY, POLTAVA, UKRAINE

ABSTRACT

Introduction: The relevance of scientific research is determined by the significant importance of lifestyle in preserving and strengthening the health of the population especially young people what determines the future of any society. Among the numerous youth lifestyle characteristics, particular attention is paid to behavioral factors, including the presence of bad habits. Data of scientific publications indicate a significant prevalence in student environment of tobacco-smoking, consumption of alcohol and other manifestations of unhealthy behavior, which are powerful factors of the risk of developing non-communicable diseases, injuries and other health disorders.

One of the most important tasks is the formation and establishment of a healthy lifestyle among medical students, because in the future they will not only treat patients, but also carry out professional activities for the prevention of diseases and risk factors for their development, correcting and overcoming already existing risk factors. Doctors must be conscious supporter of healthy lifestyle and serve as a role model for their patients.

The aim: To identify the features of prevalence of tobacco use, alcohol and energy drinks among medical students and justify ways of counteraction based on the results of own sociological research, scientific literature, WHO program and strategic documents.

Materials and methods: An anonymous questioning was covered 948 students of institutions of higher medical education including 34.5% of men and 65.5% women. It had been used bibliosemantic, sociological and medical-statistical methods.

The information base of the study included program and strategic documents of WHO, sources of scientific literature, data of own research. Statistical processing of the obtained results was carried out using generally accepted medical statistics methods using licensed programs (SPSS, STATA, Statistica 10.0 and MS Excel XP).

Results: The results of the study indicate a sufficient significant prevalence in the student environment of tobacco, alcohol and energy drinks. Third part of students consumes tobacco, of which 15.2 per 100 respondents are regular smokers with experience, 9.3 per 100 respondents smoked 10 or more cigarettes a day.

A new negative trend is the use of hookah by almost half of the interviewed students and consumption of electronic cigarettes (8.5 per 100 respondents), what must be taken into account when substantiating counteraction ways. Three quarters of the respondents consume alcohol. Despite the prevailing consumption of low-alcohol beverages and wine by respondents, every seventh of the respondents consumes strong drinks. The reason for the worrying is the fact that 13.6 ± 4.7 in 100 respondents combine the consuming of energy drinks with alcohol. By 4.9 per 100 students interviewed, energy drink increases the desire to drink alcohol.

Conclusions: The revealed connection between tobacco, alcohol and energy drinks consumption among medical students proves the need for an integrated approach to reduce the prevalence of risk factors in the context of a healthy lifestyle.

KEY WORDS: life-style, student youth, risk factors, unhealthy habits, healthy lifestyle, prevention

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INTRODUCTION

The relevance of scientific research is determined by the significant importance of lifestyle in preserving and strengthening the health of the population especially young people what determines the future of any society.

Among the numerous youth lifestyle characteristics, particular attention is paid to behavioral factors, including the presence of bad habits [1-3].

It is proved that the consumption of tobacco and alcohol is a powerful risk factor for the development of non-infectious

diseases, injuries, other health disorders. These risk factors make a significant contribution to the formation of the burden of illness, including disability and mortality, lead to significant economic costs in the healthcare system, which is a significant financial burden on families and communities [4-8].

Taking into account the stated in a number of strategic and program documents of the International and European regional level, priority is given to the issues of combating consumption of tobacco, harmful and dangerous consumption of alcohol [9].

Recently, a significant number of scientific publications indicate an increasing prevalence of a relatively new risk factor for the development of diseases, namely energy drinks. This is especially true for young people, among which the use of energy is becoming very popular.

Knowledge of the scale of the problem, features and trends in different groups of the population, the root causes of the choice of unhealthy behavior can justify the directions of counteraction with proven effectiveness. That is why studying the prevalence of leading factors in the development of youth health issues is extremely relevant in terms of an adequate response to existing challenges.

The relevance of this topic is substantially increased in relation to the environment of students of higher medical education institutions, who in the future will have to carry out professional activities to prevent diseases and risk factors for their development, to provide assistance in correcting and overcoming already existing risk factors. It is clear that they themselves should be a role model for their patients, so the formation and establishment of a healthy lifestyle among future physicians is an extremely important task.

Therefore, according to the WHO experts, the priority task of all countries of the world should be to improve preventive work in national health systems, to actively develop a healthy lifestyle and to have a responsible attitude towards their health in different groups of the population, starting with the youngest age.

This requires in-depth study of the peculiarities and trends of the prevalence of unhealthy habits among different contingents of the population, especially children and youth, monitoring and evaluation of these phenomena, formation of the principles of a healthy lifestyle, responsible attitude towards their health, prevention and correction of behavioral risk factors on an individual, group and population levels, advocacy, information and awareness raising among the population, advocacy and advancement of healthy lifestyle issues in all policies with the participation of the whole society using national approaches.

THE AIM

To study the prevalence of tobacco use, alcohol and energy drinks among medical students and justify ways to reduce the prevalence of harmful habits among future physicians based on the results of own research, data of scientific literature, taking into account the priorities of WHO program and strategic documents in the field of disease prevention and healthy lifestyle.

MATERIALS AND METHODS

The research was conducted on the basis of Bogomolets NMU within the framework of research work «Scientific substantiation of personnel support of public health service» (2017-2019). An anonymous questioning was covered 948 students of institutions of higher medical education, namely Bogomolets National Medical University, Kyiv and

the Ukrainian Medical Dentistry Academy of the Ministry of Health of Ukraine, Poltava. 34.5% of males and 65.5% females were included in the set sample. By age distribution, the largest group was formed by students aged 20-25, whose proportion was 80,9%, while respondents under 20 and over 25 accounted for 13.3% and 5.8%, respectively.

The work uses a series of informative research methods based on the base of a systematic approach, including a bibliosemantic method – for studying world and domestic experience on the researched questions, sociological – to detect the prevalence of bad habits among students of the institutions of higher medical education, medical and statistical methods – for collecting, processing and analyzing the statistical information obtained during the study. The sociological research among medical students was conducted with use the questionnaire included 30 issues of closed and semi-closed type. to study the to study attitude of future doctors to smoking, use of alcohol and energy drinks.

The information base of the study included program and strategic documents of WHO, sources of scientific literature and data of own research.

Statistical processing of the obtained results was carried out using generally accepted medical statistics methods using licensed programs (SPSS, STATA, Statistica 10.0 and MS Excel XP).

RESULTS AND DISCUSSION

In the new European policy “Health-2020”, the priority goal is to strengthen health for all and to reduce inequities in the context of health. At the same time, the focus is on the need to ensure universal coverage of public health services, primarily preventative, from birth and throughout whole life. Priority areas for action include investing in health at all stages of human life, empowerment of rights and opportunities of citizens, as well as solution of the most current problems of non-infectious and infectious diseases [9].

In this context, a critical role is played by the formation of a healthy lifestyle and the prevention of bad habits, starting at the earliest age as possible.

Advanced strategies for prevention and correction of various risk factors are outlined in strategic documents of the global, regional and national levels. Of particular interest are integrated strategies, in particular the Global Strategy for the prevention and protection from non-communicable diseases and the Global Plan of action for the prevention and protection from non-communicable diseases 2013-2020.

According to these documents, the European Action Plan for the Implementation of the European Strategy for the Prevention and Protection from Non-Communicable Diseases for 2012-2016 has been developed and approved by the World Health Organization (WHO) in the European Region. In addition, in the majority of countries, the Global Strategy for the Reducing of Harmful Alcohol Consumption is being implemented, the European Action Plan for the Reduction of Harmful Alcohol Consumption for 2012-2020 [10-13].

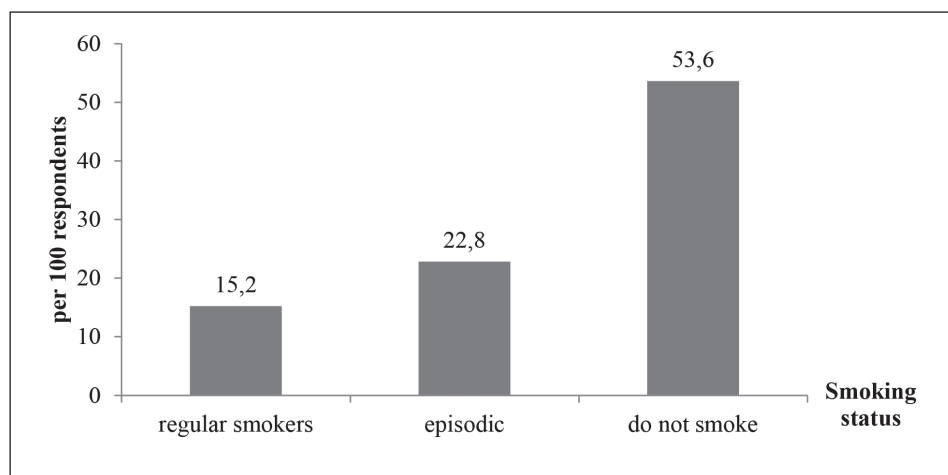


Fig. 1. Smoking status of students of institutions of higher medical education (per 100 respondents)

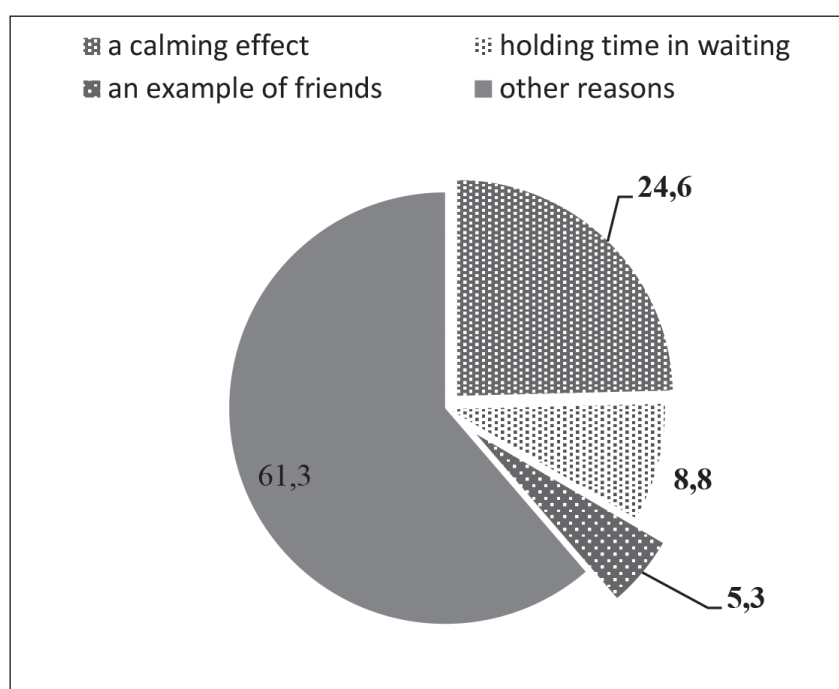


Fig. 2. Structure of causes of tobacco consumption by medical students (%)

Implementation of strategic and program documents in the national context requires scientific support, with the identification of the features and trends of the phenomena to which the measures of influence are directed, their critical analysis, etc.

Analysis of the scientific literature showed a significant prevalence of harmful risk factors for the development of diseases in the population of Ukrainian youth, including students of higher educational institutions [14-18].

According to the results of the study of the prevalence of smoking, up to 40% of the polled young people recognized the presence of this bad habit. Moreover, the polynomial frequency was quite significant and amounted to 8 cigarettes a day [19].

Of particular concern is the variety of ways of tobacco consumption, in particular, the hookah smoking, which is relatively new for the Ukrainian youth population. This way of entering the body in addition to the total harm from nicotine, is also dangerous as a source of infectious

pathogens. The results of a sociological survey showed that almost two thirds of the respondents smoked a hookah at least once in their life, at the same time 8% of respondents confirmed hookah smoking sporadically or regularly. The situation is complicated by the significant prevalence of alcohol consumption. Among those respondents, 35.9% consumed alcoholic beverages at least once a week. At the same time, 13.7% of respondents indicated the consumption of strong alcoholic beverages, 9.1% – wines, 7.7% – low-alcohol beverages [19].

An important characteristic of the formation of health of young people is often a low level of physical activity, which requires in-depth study and development and implementation of strategies aimed at overcoming hypodynamia and improving health [20].

Comprehensive research aimed at the prevention of non-communicable diseases among young people and students, it was found that regardless of the level of the institution and the profile of education, risk factors for

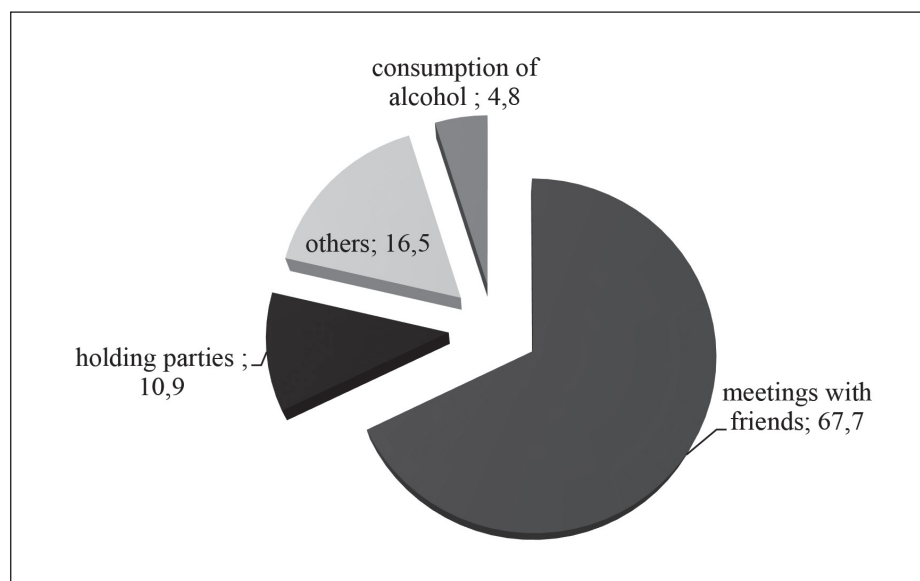


Fig. 3. Reasons for visiting places where alcoholic beverages are consumed, by students of institutions of higher medical education (per 100 respondents)

ill-health are quite common. They lead to the development and progression of various non-communicable diseases.

In the course of the study, among the students of higher educational institutions of medical, technical and humanitarian areas, the established habit of drinking alcoholic beverages was detected, $5.4 \pm 1.2\%$ of the respondents confirmed and smoking, which 26.8% of the respondents confirmed. The results of the study established the existing need to substantiate a set of measures to form the basis of a healthy lifestyle for students [21].

Researchers are unanimous in their opinion about the need to ensure the optimization of preventive activities in the integrated delivery of medical care. At the same time, emphasis is placed on preserving and strengthening the health of school and student youth for the prevention of numerous infectious and non-infectious diseases. This important and complex process depends on the timely identification of risk factors for the development of diseases, their correction, monitoring and evaluation of the health of young people and students, hardening and health promotion [22].

Preventive and health work requires a certain restructuring of the organization of the educational process in institutions of higher education, with the aim of leveling situations that adversely affect the health of students. In this context, the active involvement of specialists in the psychological and social services, the use of an intersectoral approach to solving the health problems of students are proposed [23].

The results of our sociological research on the prevalence of harmful habits among students of institutions of higher medical education showed that tobacco is used by 38.0 ± 3.3 per 100 respondents. Regular smokers are 15.2 ± 3.9 per 100 respondents, periodic (episodic) – 22.8 ± 3.7 . Some students pointed to isolated cases of tobacco consumption. At the same time, 53.6 ± 2.9 per 100 respondents indicated that they do not smoke and are indifferent to nicotine (Fig. 1).

Among the causes of smoking, 24.5 ± 4.5 per 100 interviewed students indicated a calming effect, 8.8 ± 4.9 –

holding time in waiting, 5.3 ± 5.0 – an example of friends, 61.3 ± 3.2 – other reasons (Fig.2).

According to the intensity of tobacco consumption, respondents distributed as follows: 18.6 ± 2.8 per 100 respondents smoked up to 10 cigarettes a day, 8.3 – from 10 to 20 cigarettes, 1.0 – more than 20 cigarettes a day.

Among different ways of using tobacco, students preferred hookah, which was indicated by 48.0 ± 4.0 per 100 respondents. Traditionally, the using of cigarettes was high, which was confirmed by 39.6 ± 4.3 per 100 respondents. The using of electronic cigarettes was confirmed by 8.5 ± 5.3 per 100 respondents. The combination of different ways of using tobacco was indicated by 3.9 per 100 respondents.

Smoking among students is often combined with alcohol use. Among students who smoke, 90.0 per 100 respondents drink alcohol, among those who do not smoke – 70.9 , respectively. The calculation of the chi-square indicates the significance of this difference, since the calculated value (27.0) exceeds the table (9.6).

The results of the research of the prevalence of alcohol consumption among students of higher medical education institutions showed that it was used by 76.1 ± 2.0 per 100 respondents. Only less than a quarter of respondents (23.9 ± 3.7) indicated that they do not consume alcoholic beverages.

At the same time, visits to places where alcoholic beverages are consumed once a week have been confirmed by 24.5 ± 3.6 per 100 respondents, twice a week – 16.4 ± 3.8 , more than three times a week – 11.1 ± 4.0 . In general, only less than half of respondents did not attend such institutions (48.0 ± 3.0 per 100 respondents).

The most common reason for visiting places where alcoholic beverages are consumed, students called meetings with friends – 67.7 ± 2.2 per 100 respondents. Every tenth respondent indicated holding parties among the reasons for visiting such places (10.9 ± 4.0). One in six said that the reason for visiting drinking places was other. At the same time, 4.8 per 100 respondents indicated the main reason – the consumption of alcohol (Fig. 3).

Almost half of the respondents confirmed the alcohol consumption at weekends (46.3 ± 3.1 per 100 respondents). Almost 18.5 ± 3.8 per 100 respondents were drinking on holidays. It is worrying that 11.2 ± 4.0 per 100 respondents indicated alcohol consumption during the week.

According to students, the main reasons for alcohol consumption are the satisfaction (35.4 ± 3.5 per 100 respondents), alcohol consumption by friends (7.4 per 100), and solving existing problems (2.9 per 100 respondents).

Analysis of the models of alcohol consumption by medical students showed that the most frequent drinking is wine, as indicated by 43.1 ± 3.2 per 100 respondents, and beer, which confirmed 21.8 ± 3.8 per 100 respondents. At the same time, 14.8 ± 3.9 medical students called strong alcoholic beverages the most often for consumption. Attention is drawn to the negative fact that 29.4 ± 3.6 per 100 respondents mix of different alcoholic beverages when they are consumed.

When asked whether you drink more alcohol, in the company or alone, 76.2 ± 2.2 per 100 respondents indicated that they consume more alcohol in the company. However, 17.0 ± 4.1 per 100 respondents answered that it does not matter, and 2.9 per 100 respondents indicated that they consume more alcohol alone.

The vast majority of respondents, namely 61.1 ± 2.9 per 100 students, indicated that alcohol causes them a good mood. About a third part (31.8 ± 3.8) responded that drinking alcohol causes a lot of different mood. At the same time, 3.2 per 100 respondents pointed to aggression as a result of alcohol consumption, 3.6 per – to sadness.

Almost a third of the respondents (32.3 ± 3.7 per 100) confirmed the fact that smoking was used during the consumption of alcoholic beverages. At the same time, 17.0 ± 4.4 respondents are convinced of the feasibility of combining of the alcohol consumption with smoking.

Studying differences in the frequency of smoking among students who consume alcohol and who do not consume showed that this difference is significant, as the calculated value of the chi-square (2.5 exceeds the table value (1.9)).

The results of the study of the prevalence of energy drinks consumption among students of higher medical education institutions showed that they were consumed by 32.5 ± 4.5 per 100 respondents. At the same time, 16.6 per 100 respondents indicated that they consume it once a week, 12.3 – twice a week, 3.6 – more than three times a week.

The vast majority of respondents indicated that they preferred to consume energy drinks during their study (24.8 ± 4.5 per 100 students) and during physical work (6.7 per 100 respondents).

An analysis of the volume of consumption of energy drinks per day showed that energy drinks are consumed once a day by 16.2 per 100 people polled, twice by 3.6, 3 times or more – 3.6.

The volume of simultaneous consumption of energy drinks (during the disco, during the evening) was 1 bottle for 17.2 ± 4.3 per 100 students, 2 bottles – 3.6 per 100 students, 3 and more – 3.6 per 100 students.

The purpose of the consumption of energy drinks is

activation (18.9 ± 4.7 per 100 respondents), increase of physical capacity (10.4), reception satisfaction of taste (9.0).

According to students, the key to choosing an energy drink is the brand, as was indicated by 17.5 ± 5.5 per 100 respondents, the taste, which was confirmed by 45.2 ± 4.6 per 100 respondents, ingredients of the energy drink, noted 35.8 ± 4.9 per 100 respondents respectively.

The result of cheering the body with energy drinks is an increase in concentration of attention, as indicated by 23.1 ± 4.9 per 100 respondents, an increase in physical activity, which marked 22.7 ± 4.9 per 100 respondents, a decrease in the sense of hunger (5.0 per 100 of respondents). About a (18.3 ± 4.8 per 100 respondents) confirmed the influence of the use of energy drinks on the mood.

After a short period after consuming of energy drinks, the respondents experienced improvement in physical activity (22.0 ± 4.6 in 100 respondents), increased concentration (12.0 ± 4.9 in 100 respondents), and internal calm (3.3 per 100 respondents). However, the next day after awakening, 9.4 per 100 respondents complained of stomach pain, 7.1 per 100 respondents – of internal anxiety.

The reason for the worrying is the fact that 13.6 ± 4.7 in 100 respondents combine the consuming of energy drinks with alcohol. By 4.9 per 100 students interviewed, energy drink increases the desire to drink alcohol.

The study of the differences in the frequency of energy drink consumption among students who drink alcohol and who do not drink showed that this difference is significant, because the calculated value of the chi-square – 2.4 exceeds the table value (1.8).

The relationship established between the different factors of the risk of developing diseases, in particular between tobacco use, alcohol and energy drinks, has been established in the course of the research, which shows the need for an integrated approach to reduce their prevalence among the students and about the potential for positive results in terms of healthy lifestyle when reducing the prevalence of even one risk factor.

According to students, the effective ways of forming a healthy lifestyle and reducing unhealthy behavior are: information and education activities at the population level (63.7 per 100 respondents); more general coverage of prevention issues in the educational process in the institutions of higher medical education (70.5 per 100 of respondents), introduction of targeted lectures and trainings, master classes on the issue of correction and management of disease risk factors (83.4 per 100 respondents), holding of information campaigns (58.8 per 100 respondents), etc (Table I).

The generalization of the data obtained during the research, as well as the analysis of scientific literature and recommended international strategies by WHO, allowed them to be used for the preparation of information materials and for the holding of a number of information and educational events. In particular, the negative impact of smoking, dangerous and harmful consumption of alcohol, the consumption of energy drinks is highlighted for students of the Bogomolets National Medical University during the sessions of the Student Scientific Circle of the Department of Social

Table I. Student assessment of ways of forming a healthy lifestyle and reducing unhealthy behavior (per 100 respondents)

Ways of forming a healthy lifestyle and reducing unhealthy behavior	P±m
Introduction of targeted lectures and trainings, master classes	83,4±1,2
More general coverage of prevention issues in the educational process in the institutions of higher medical education	70,5±1,5
Information and education activities at the population level	63,7±1,6
Holding of information campaigns	58,7±1,6

Medicine and Public Health, during scientific conferences, information and educational events, etc.

During the meetings of the Student Scientific Circle of the Department of Social Medicine and Public Health to consider the issues of the influence of harmful factors on health and counteracting unhealthy behavior, interactive methods are widely used, including discussions, work in small groups, brainstorming, case study, business games.

Materials about the situation with the prevalence of risk factors in the student environment are covered in the abstracts of the IV International Congress of the Polish Society of Public Health, an article in the scientific journal was prepared.

Current experience has shown that informational and educational activities on correction of unhealthy behavior factors will contribute to the reduction and successful management of risk factors for diseases, as well as to the establishment of a healthy lifestyle for students.

CONCLUSIONS

The results of the study indicate a sufficient significant prevalence of manifestations of unhealthy behavior among students of institutions of higher medical education. This is indicated by the prevalence in the student environment of tobacco, alcohol and energy drinks.

The reason for the worrying is the fact that third part of students consumes tobacco, of which 15.2 per 100 respondents are regular smokers with experience, 9.3 per 100 respondents smoked 10 or more cigarettes a day. Along with the consumption of cigarettes, almost half of the interviewed students indicated the consumption of hookah, 8.5 per 100 respondents – the consumption of electronic cigarettes, which must be taken into account when substantiating counteraction ways.

Significant is the prevalence of alcohol consumption by students, as indicated by three quarters of the respondents. Despite the prevailing consumption of low-alcohol beverages and wine by respondents, every seventh of the respondents consumes strong drinks. At the same time, every fourth respondent mixes different drinks during consumption of alcohol. The negative consequences of using alcohol are the appearance in one third of respondents of aggression, sadness, or mixed mood. The prevalence of alcohol consumption is associated with tobacco consumption.

Relative to the new unfavorable health trend is the prevalence of energy drink consumption by students, which was confirmed by one third of the respondents. At the same

time, respondents noted short-term effects in the form of increased work capacity, mood that passed the next day in anxiety, the appearance of pain in the stomach, etc. Each seventh of the respondents indicated a combination of alcohol and energy drinks.

The existing connection between tobacco, alcohol and energy drinks consumption proves the need for an integrated approach to reduce their prevalence among students and about the potential for achieving positive results in terms of healthy lifestyles.

The special aspects and causes of the prevalence of risk factors of illness and unhealthy behavior among student youth indicate the need for a complex approach to its prevention and reduction with the application of modern adequate methods, forms and methods.

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According to the order of the Authorship.

Conflict of interest:

The Authors declare no conflict of interest

CORRESPONDING AUTHOR

Tetiana S. Gruzeva

National Bogomolets Medical University
Saksaganskogo St. 42/43, 01033 Kyiv, Ukraine
e-mail: gruzieva@ukr.net

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