

Prace oryginalne - Original papers

# THE ANALYSIS OF THE MEDICAL UNIVERSITY STUDENTS' HEALTH CONDITION AND LIFESTYLE

## Ocena stanu zdrowia i stylu życia studentów Uniwersytetu Medycznego

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**A-** przygotowanie projektu badania (study design), **B-** zbieranie danych (data collection), **C-** analiza statystyczna (statistical analysis), **D-** interpretacja danych (data interpretation), **E-** przygotowanie maszynopisu (manuscript preparation), **F-** opracowanie piśmiennictwa (literature search), **G-** pozyskanie funduszy (funds collection)

### Summary

**Introduction:** Significant psychophysiological burdens and unhealthy lifestyle constitute the risk factors leading to students' health deterioration.

**Purpose:** The purpose of the research was the analysis of students' health condition and lifestyle in medical university.

**Material and methods:** The objects of the research were 100 third year students of the Faculties of General Medicine and Pediatrics of Grodno State Medical University. For the study of students' orientation on healthy lifestyle, a special scale-type questionnaire was developed and used.

**Results:** According to the respondents' opinions it has been detected that the basic factors influencing the state of health are the lifestyle and the living conditions. The students activity is evaluated as very low as well as their rational nutrition. The majority of them smoke and drink alcohol.

**Conclusions:** The peculiarities of studying at a medical university accompanied by imbalanced nutrition might lead to the deterioration of health in the students which are doctors to be. The results ought to lead to the optimization of prophylaxis programs and entire alteration of the students' lifestyles.

**Keywords:** lifestyle, medical students, health

### Streszczenie

**Wstęp:** Istotne psychofizjologiczne problemy i niezdrowy styl życia młodzieży są czynnikami ryzyka prowadzącymi do pogorszenia stanu zdrowia.

**Cel:** Ocena stanu zdrowia i stylu życia studentów Uniwersytetu Medycznego w Grodnie.

**Materiał i metody:** Przebadano 100 studentów trzeciego roku wydziałów Medycyny Ogólnej i Pediatrii Uniwersytetu Medycznego w Grodnie. W tym celu został opracowany i wykorzystany specjalny kwestionariusz ankiety anonimowej.

**Wyniki:** Głównymi czynnikami, które wpływają na stan zdrowia studentów, są styl i warunki życia. Studenci wykazują niską aktywność ruchową oraz nieprzestrzeganie zasad racjonalnego odżywiania. Duża liczba studentów pali papierosy i spożywa napoje alkoholowe.

**Wnioski:** Psychofizjologiczne problemy procesu szkolenia w połączeniu z nieracjonalnym odżywianiem mogą prowadzić do pogorszenia stanu zdrowia studentów Uniwersytetu Medycznego – przyszłych lekarzy. Stąd temat ten powinien zająć czołowe miejsce w przyszłych programach profilaktycznych.

**Słowa kluczowe:** styl życia, studenci Uniwersytetu Medycznego, zdrowie

## Introduction

Students are a group of population with characteristic working and living conditions. The basic elements of students' healthy lifestyle are: effective study organization, optimal motion activity, rational nutrition, giving up bad habits, psychophysiological status (generation of positive emotions) etc. [1]. Nowadays students' health state is a topical socially important problem, as learning activity organization influences the formation of individual health in students. Considerable mental load, unhealthy living and inadequate unbalanced nutrition can lead to premorbid conditions which can transform into pathological processes in some cases [2].

## Aim of the study

Purpose of the research: hygienic assessment of medical students' state of health and lifestyle.

## Material and methods

Objects of the research were 100 the third year students of the Faculties of General Medicine and Pediatrics of Grodno State Medical University aged 19-20: 65% of females, 35% of males. To study students' orientation on healthy lifestyle special scale-type questionnaire "attitude to health" was developed and used. The respondents were asked to assess their state of health and adherence to healthy lifestyle principles using a ten-point scale. Statistical analysis was performed with the help of software package STATISTICA 6.0.

## Results

Majority of students (52%) have assessed their state of health as "satisfactory", 13% - as "good", 28% - as "rather good", 7% - as "poor" or "rather poor". Analysis of students' life values scale (more than 1 variant of answer was provided) allowed detecting that satisfactory state of health was in priority - 56% of responses. Rather high rating was given to "family" (52%) and "love" (50%). The latter position was significantly higher evaluated by females ( $p < 0.05$ ). The fourth place was given to «development» - 42% of responses, the fifth - to the «material security» (40%), the sixth - to «education» (37%), the seventh - to «friendship» (33%). Less significant factors appeared to be «interesting job» (26%), «self confidence» (22%), «beauty» (19%), «happiness of others» (15%), «cognition» (14%), «creativity» (12%), «entertainment» (10%). The last rating place was given to «careless life» - 3% of responses.

According to respondents' opinions it has been detected that the basic factors influencing the state of health are lifestyle and living conditions. So, some of the most significant factors chosen by students have been bad work-rest regime ( $8.5 \pm 0.51$  points), smoking ( $7.3 \pm 0.45$ ), occupational hazards ( $6.8 \pm 0.42$ ), unfavorable ecological conditions ( $6.1 \pm 0.72$ ), unbalanced nutrition ( $5.9 \pm 0.39$ ), high psycho-emotional tension ( $4.7 \pm 0.26$ ), low physical activity ( $3.3 \pm 0.75$ ),

alcohol abuse ( $2.8 \pm 0.41$ ), insufficient medical care ( $1.9 \pm 0.58$ ). Thus, we don't observe great scatter in various criteria of healthy lifestyle.

Using correlation analysis interrelation of healthy lifestyle indicators was studied. So, integral indicator of healthy lifestyle is closely connected ( $p < 0.01$ ) with such criteria as: work-rest regime, rational nutrition and physical activity. It indicates that the mentioned above criteria have the "considerable weight" among students following the principles of healthy lifestyle. This conclusion is supported by the fact, that such criteria as work-rest regime, physical activity and satisfactory state of health had the majority of links with other indicators and were closely related ( $p < 0.01$ ), forming complex of symptoms. In other words these criteria are basic in the following healthy life style. Therefore in the process of youth orientation to the healthy lifestyle special attention should be given to propaganda of these aspects. However not more than a quarter of respondents (25%) think, that they make enough effort to keep fit, while more than half of respondents (55%) admit the fact that they give not much attention to their state of health and use medical help only in case of diseases. All the rest respondents (20%) couldn't answer that question.

It has been detected that there is significant difference between students' understanding of healthy lifestyle necessity and its practical implementation into their everyday life. Though, it would seem that medical students should understand the necessity of satisfactory state of health as well as the efforts to maintain it for successful life. However insufficient attention of students to their health is often conditioned not only by tight time - 72% of respondents (most significant variant) - and economic conditions (financial problems) - 52%, but by lack of will power, physical and moral recourses, which was admitted by almost half of the respondents (47%).

The study of students' theoretical readiness to health saving (cognitive component) has showed that the most popular measure for health promotion was "spa and resort treatment" (40% of respondents). "Appropriate combination of work and leisure" was marked by 35% of respondents.

It is a well-known fact that general cultural level decrease including sanitary and hygienic culture promotes the spread of self-destructive behavior among students. According to the research results only 28% of respondents are ready to give up bad habits deteriorating their health. Besides at the time of research 30% of students smoked, 18% of respondents quit smoking, 52% - had never smoked. The majority of students (81%) drank alcohol, among which 4% - drank alcohol regularly, and only 19% of respondents had never drunk alcohol.

Even less activity is expressed by students in following the principles of rational nutrition - 19% of responses. Taking in account the lesson duration (1.5 hours), break duration (1-15 minutes) and necessity of transfer between university buildings, the timely food intake is hardly possible. Only 50% of students

visit university canteen at the lunchtime. All the rest students have snacks or do not eat at all. Most students (57%) eat once or twice a day and only 17% of respondents have regular meals. In the result 62.0% of students of the Faculty of General Medicine have noted that the most substantial and caloric meal is late dinner.

Low values have been obtained for such indicators as proper rest – 17% (it can be explained by large academic load as well as young age of respondents and their high stamina) and physical activity, including sports – 15%, which is highly negative feature of youth lifestyle. According to these criteria youth considerably advance other age groups, which in its turn induce various health problems in future [3]. It should be noted that proper rest is negatively connected with physical activity ( $p < 0.05$ ), that is students do not identify and do not compare these life phenomena.

## Discussion

At present there is a range of impacts, causing this or that health condition, i.e. risk factors. The first one is lifestyle which has a direct effect on health [2]. The results of the most important standard indicators research, characterizing the individuals' attitude to their health (health self-assessment; place of health in the system of life values; character of nutrition; presence of bad habits like smoking alcohol or drug abuse; presence of stressors) [4], testify that the complex impact of unfavorable factors destroys healthy lifestyle principles and negatively affects quality of life of medical students. Taking into account age specificity of the students and considerable peculiarities of academic process, characterized by intensive mental activity due to increased academic load and class hours deficiency the increased demand on compensatory-adaptive systems, functioning under stress, is made [5]. The limited capacity of the state to carry out social and legal protection of this population group [6] as well as insufficient medical activity of the students themselves [7] induces epidemiologic increase of somatic pathology. As it is shown by I.V. Kiseliova (2010), by the second year number of morbid events among medical students increases by 23%, while by the fourth year - by 43%; the quarter of students passes to the lower medical group. Functional state analysis has allowed to divide them according to health condition in the following way: high level – 1,8%; normal – 27,7%; low – 41,5%; very low – 29% [8]. We have detected such pathological patterns of behavior as smoking and alcoholism which shows that medical students are not ready to overcome intensive social stress. It should be noted that, as shown by E.G. Kosovsky (2007), the increase of this pathology is registered during the education period: thus, from the first year to the last one the increase in spread of smoking among students was 29,7%, of alcohol intake – 47,6%, of drugs use – 32,0% [9]. Considering the detected ethiopathological conditionality of health deviations and presence of stable symptom complex

of risk factors (work-rest schedule, physical activity, character of nutrition) it is necessary to work out specific measures directed at improvement of students' lifestyle. Besides, these measures should be based on the following principles: approximation of health level to socially necessary value; promotion of "health trend" via mass media; increase of sanological culture using hygienic training; inclusion of prevention programs into academic process taking into account individual psychological features of medical students.

## Conclusions

This way, peculiarities of education combined with unbalanced nutrition can lead to deterioration of psychophysiological status and state of health in medical students. It determines the guidelines of their lifestyle optimization: rationalization of work and leisure, nutrition character, increase of physical activity and giving up bad habits.

## References

1. Isiutsina-Fiadotkava TS. Lifestyle of medical students. *Med J* 2010; 1: 145-151.
2. Batrymbetova SA. Health of students according to the subjective assessment and risk factors that contribute to it. *Public Health* 2008; 4: 38-39.
3. Cecchini M, Sassi F, Lauer JA, Lee YY, Guajardo-Barron V, Chisholm D. Tackling of unhealthy diets, physical inactivity, and obesity: health effects and cost-effectiveness. *Lancet* 2010 Nov 20; 376 (9754): 1775-84.
4. Kupchinov RI. *A healthy lifestyle of students*. Minsk: Nat. Institute of Education; 2007.
5. Popov A V. *Complex social and hygienic health research medical students: Author's abstract of dissertation*. Moscow; 2008.
6. Blinova, EG. *Scientific bases of socio-hygienic monitoring the learning environment of students in educational institutions of higher education: Author's abstract of dissertation*. Moscow; 2010.
7. Sysoeva, OV. *Socio-hygienic aspects of formation health behavior of university students: Author's abstract of dissertation*. Khabarovsk; 2009.
8. Kiseliova IV. *Scientific substantiation of the organizational model of health students: Author's abstract of dissertation*. Kazan; 2010.
9. Kosovsky EG. *Health and optimization of care for university students of Magnitogorsk in the new socio-economic conditions: Author's abstract of dissertation*. Moscow; 2007.

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