

EXERCISES FOR STUDENTS OF DIFFERENT MEDICAL GROUPS AS FACTORS OF THE WEAKENING BAD HABITS AT STUDENTS

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Annotation. The changes in the prevalence and strength of dependence on smoking and alcohol are studied. A comparative analysis of the strength of dependence on smoking and alcohol use among students attending classroom and those who were taught extracurricular. Experimenting In 1200 students participated. Research methods were estimated survey methods and mathematical processing of the survey, as well as methods of statistics. The results of the survey of more than 1226 students. It is proved that the contents should the physical training necessary to introduce elements that reduce the prevalence of these bad habits among students. It is shown that training health workshops are more effective than the physical training for the relatively healthy students.

Key words: students, physical culture, cigun, smoking, alcohol.

Introduction

Great quantity of HEE students has weakened health. One of health worsening factors is harmful habits.

The most frequent and destructive harmful habits are smoking and alcohol drinking. Smoking is especially dangerous, because it harms not only the smoker, but also all people, who surround him. Administrative measures, for example removal of smoking zones out of educational establishments, probably help to reduce harm, which smokers injure to those, who do not smoking. However such measures do not reduce the extent of this habit spread among students. Alcohol misuse results not only in heavy diseases of human organism but destructs his mentality, causes degradation of personality. Students with alcohol misuse lose ability to full fledged studying in HEE and can not become highly qualified specialists.

The problem of harmful habits level's reduction – smoking and alcohol misuse – is very urgent for students and requires its solution.

Last years this problem was regarded by different authors from different positions. Ye.I. Dubrovnskaya and N.V. Radkevich, for example, studied social-psychological aspects of students' tobacco-smoking not touching the problem of alcoholism [1,7]. G.F. Kuzmenok studied using of psycho-active substances (tobacco and alcohol inclusive) by students from position of perfection of prevention system from these habits [6]. But neither these authors nor any other studied the influence of HEE physical culture classes on the spread of smoking and alcoholism among students and the level of their dependence on these habits. In our works [3,4] we carried out preliminary analysis of prevalence and force of dependence on smoking and alcohol of HEE students with weakened health, which study as per special health program. In these work insufficient attention was paid to analysis of such processes in the most numerous group of students – those, who have no heavy health abnormalities. Besides, the obtained, last time, new data require additional analysis and specifying of conclusions, which were made in [3,4].

In our ecological zone it is difficult to find people, having no disorders. We shall call relatively sound students (RSS) those, who have high self-feeling, even if they have some diseases, who attend physical culture classes for main group students (even if they were related to preliminary health group).

Students with weakened health and released from physical culture classes in main group (special health group SHG) in our HEE are trained in physical culture in compliance with specialization program "Health improving practicum on the base of Chinese gymnastic Tsi-Gun" (HIP). The program of valeological in-class practicum includes relaxation and joint warming up, Chinese gymnastic Tsi-Gun, and exercises on self regulation, oriented on improvement of physical and psychic health. Those students, who cannot attend in-class trainings, designed for SHG students, are given special home tasks (HT). HT is the system of exercises on self regulation, emotional recreation, development of positive thinking, solution of personal problems (in more detail see [2]).

During several years we have been conducting researches of HIP efficiency. It has been proved that students, who are trained by HIP program, have positive changes of personal components of healthy life style [5]. But research of interconnection of HIP classes and change of extent of dependence on harmful habits we have only started. The conclusions, made by us in [3,4], are rather preliminary, because little samples of smoking and drinking students did not permit to obtain statistically confident results on all questions of the research..

One of the most urgent tasks of modern Russian higher education is formation and strengthening of students' healthy life style, the most important component of which is absence of harmful habits of smoking and alcohol drinking. Development and implementation in academic process of new efficient health improving technologies, which could facilitate reduction of harmful habit prevalence among students is an important practical task. For effective solution of this task it is necessary to study the change of prevalence and force of dependence on smoking and alcohol among students both by traditional and by new technologies.

The work has been fulfilled as per plan of scientific & research works of Siberian state aero-space university, named after academician M.F. Reshetnirov.

Purpose, tasks of the work, material and methods.

The purpose of the work

1. To study the change of prevalence and force of dependence on smoking and alcohol among students of 1-3 years of study.
2. To prove that HIP trainings facilitate reduction of prevalence and force of dependence on smoking and alcohol among students.
3. To prove that HIP trainings are more efficient for reduction of students' dependence on smoking and alcohol, than physical culture classes for SHG.

The tasks of the research

1. To carry out analysis of change of prevalence and force of dependence on smoking and alcohol among SHG students at 1-3 years of study at Sib GAU.
2. To carry out analysis of change of prevalence and force of dependence on smoking and alcohol among SHG students at 1-3 years of study at Sib GAU, who were trained by HIP program.
3. To carry out comparative analysis of main group student, SHG students, who were trained in-class and those, who were trained out of class by HIP program.

Material. For researches we sampled students, who actively attended physical culture trainings. They were combined into different students' groups, who studied at HEE during 1-3 years. Designation of these groups is as follows: 1- RSS of the 1st year (427 students), who attended academic physical culture trainings; 2- RSS of the 2nd year (202 persons); 3- RSS of the 3rd year (287 persons); A1- SHG students, who attended in-class HIP trainings during one academic year or less – (217 persons); A2– SHG students, who attended in-class HIP trainings during three or four semesters – (115 persons); A3- SHG students, who attended in-class HIP trainings during five-six semesters – (68 persons); D1 – students, who fulfilled HT during one academic year or less – (95 persons); D2 - D1 – students, who fulfilled HT during three or more semesters – (69 persons); In total 916 RSS and more than 310 SHG students took part in the researches.

The methods of the research

1. Questioning. In our research we used evaluation questioning. Students were proposed to evaluate the force of smoking and alcohol habits by 10 points scale at the beginning of study at HEE (for RSS) or at the beginning of training by HIP program (for SHG students) and at the time of questioning (at the end of academic year).
2. Primary mathematical processing of questioning results: calculation of students' with harmful habits percentage, percent correlation of student with harmful habits of different force, percentage of students, who gave up harmful habits and those, who acquired them in the period of study; calculation of the extent of harmful habits' weakening as the difference of initial and final evaluation of habits' force; calculation of mean values of harmful habits' weakening for every group of students, calculation of percent of those, who increased or reduced the force of habit during the period of study. Harmful habit considered to be weak, if student evaluated its force by 1-2 points.
3. Statistical processing of data. Evaluation of difference between mean values confidentiality was fulfilled with the help of Student's t-criterion. The differences considered to be substantial with the level of mean value significance equal or less than 0.05 or interpreted as the trend to difference with the level of significance more than 0.05 but less than 0.15.

Results of the researches

Results of questioning are given in tables 1 and 2. In table 1 we present results of percentage calculation of smoking and drinking students with different force of dependence on smoking and alcohol in relation to the total quantity of the questioned students of corresponding groups. In table 2 there is given percentage of reduction and increase of habit's force, which was calculated in relation to the quantity of students, who smoked or misused alcohol before the period of study or in the period of questioning. The percentage of those, who gave up harmful habits, was calculated in relation to the quantity of students with harmful habits in corresponding group before the period of study. The percentage of those, who acquired harmful habits was calculated in relation to the quantity of students with harmful habits in corresponding group in the period of questioning (in brackets percent in relation to total quantity of students of the corresponding group, is given).

Table 1

Percentage of smoking and drinking alcohol students at the end of academic year

Harmful habit	Smoking								Dependence on alcohol							
	1	2	3	A1	A2	A3	Д1	Д2 3	1	2	3	A1	A2	A3	Д1	Д23
Total with harmful habits, %	23	28	33	20	12	9	20	16	36	32	46	26	26	13	22	26
Dependence middle or strong, %	17	23	26	15	8	4	16	16	22	18	33	13	14	4	8	9
Dependence weak (1-2 балла), %	6	5	7	5	4	5	4	0	14	14	13	13	12	9	14	17

Table 2

Dynamics of dependence on smoking and alcohol of students of SibGAU

Harmful habit Groups	Smoking								Dependence on alcohol							
	1	2	3	A1	A2	A3	\bar{D}_1	\bar{D}_2	1	2	3	A1	A2	A3	\bar{D}_1	\bar{D}_2
Total, persons	111	60	110	53	20	7	23	15	166	71	141	67	37	10	27	20
Extent of habit's weakening, $\pm(0-10)$	0,2	-0,8	-0,2	1,2	1,4	3,6	1,8	3,1	-0,2	-0,1	-1,0	1,1	1,1	2,8	1,4	2,0
Habit's force reduced, %	28	13	30	43	55	57	52	67	24	21	20	48	49	70	63	70
Habit's force increased, %	36	45	41	9	25	0	9	13	33	24	46	6	16	20	7	5
Giving up harmful habits, %	12	8	16	19	33	14	18	29	9	11	8	15	20	11	22	10
Acquired harmful habits, %	9(2)	18(5)	23(8)	0	14(2)	0	5(1)	9(1)	12(4)	9(3)	18(8)	4(1)	7(2)	11(1)	0	0

The questioning of students showed:

1. Great quantity of 1st- 3rd years RSS has harmful habits: about 20-30% of students are smokers, from 32 to 46 % of RSS of different years of study use alcohol (see table 1). Percentage of 2nd year RSS smokers and 3rd year RSS, who use alcohol, is much higher at the end of academic year than at the beginning of study at HEE.

Most of RSS with harmful habits evaluate the force of smoking or using alcohol habits either as middle or as high (3-10 points, by 10 points scale). Percentage of students with strong or middle dependence both on smoking and alcohol, is significantly higher among RSS, than the percentage of those, who evaluate these habits as weak and is still able to give them up.

Percentage of smokers with weak dependence on smoking is comparatively low. The share of such students among 3rd year RSS is higher (and it seems to be a trend) than in other groups of smoking students.

2. Percentage of drinking alcohol RSS is significantly higher than the percentage of smokers of the same year of study. Among 1st and 3rd year RSS of group with middle or strong force of dependence, the share of drinking students is higher than the share of smokers with the same period of study. It means that the habit to alcohol is more spread than smoking among 1st-3rd year students.

3. The level of smoking habit weakening during the period of study (see table 2) or 2nd year RSS is negative and much lower than of the other students. That is why we can say that the worst situation is among 2nd year RSS, whose resistance to smoking is reduced during study at university. The extent of smoking habit's weakening of 1st and 3rd years RSS is close to zero, however the share of students with increased force of smoking habit, as a trend, is higher than the share of those, who have weakened habit. It witnesses that at 1st and 3rd year of study as well as on the 2nd year, RSS's dependence on smoking rises.

RSS, using alcohol weakening is also negative. The 3rd year students have the worst indicators, because their harmful habit weakening extent is significantly lower than of the other students. The 1st and 2nd year RSS have extent of alcohol using habit's weakening equal nearly to zero, however the share of those, who has increased habit is higher, as a trend, than the share of RSS with weakened habits. All these mean that RSS's of all years of study dependence on alcohol increases, and to the highest extent exactly at the 3rd year of study.

4. The share of RSS, who smoked at the beginning of study at HEE and gave up smoking during studying at university, is the least in RSS group of the second year of study. The share of 3rd year RSS, who gave up smoking is significantly higher than the share of 2nd year RSS, but in this group of students the percentage of those, who started smoking.

The percentage of RSS, who started smoking, is rather significant in 2nd year students' group while the percentage of 3rd year students, who started smoking, is higher as trend, than the percentage of those, who gave up smoking. This witnesses that smoking habit is still more spread among RSS during their study at university.

Percentage of RSS, who gave up alcohol are insignificantly different at different years of study. The share of RSS, who started using alcohol during study at HEE is at the 3rd year of study significantly higher than the share of those, who gave up alcohol. This confirms one more, that alcohol drinking habit at the 1-2 years of study at HEE becomes still more spread.

5. The percentage of smoking and alcohol drinking students, who attended in-class HIP trainings, is rather high while the same percentage among students, who fulfilled HT, is, as trend, lower than percentage of smokers and drinking alcohol among RSS.

Percentage of SHG students with strong or middle dependence on smoking, who attended in-class HIP trainings or, those, who have strong dependence on smoking after 2 and 3 year of study and middle or strong dependence on alcohol after 1 year, is significantly lower than RSS students of the same period of study.

Percentage of SHG students, who fulfilled HT during 1.5 or mere years and had middle or strong dependence on alcohol is significantly lower than in RSS groups of the same period of study.

Among RSS more than half of drinking students have middle or strong dependence on alcohol, but those who attended trainings by HIP program, became weakly dependent on alcohol by the end of academic year.

We can make conclusion that harmful habits of smoking and drinking alcohol are much less spread among SHG students than among RSS.

6. The extent of both harmful habits" weakening is positive in all SHG groups and is significantly higher than indicator of resistance to these habits of RSS; as a trend it grows with increasing of period of study (that is not observed in RSS, see table 2). It witnesses that HIP trainings are more efficient for weakening of harmful habits than physical culture classes for RSS.

7. As per the data of table 2, the percentage of students, who attended trainings by HIP program and gained weakened harmful habits, is much higher, while percentage of strengthening of harmful habits is significantly lower than in RSS groups with the same period of study.

In all groups of students, who were trained by HIP program, percentage of those, who have weakened bad habits (of smoking and drinking alcohol) is much higher than the percentage of students, whose bad habits strengthened. It proves again high efficiency of any HIP training.

8. The percentage of SHG students, who started to smoke or drink alcohol in the process of HIP trainings, is significantly lower than in RSS groups of the same period of study.

The percentage of A1 and A2 groups" students, who gave up smoking or drinking alcohol, is either significant or is higher as trend than in RSS groups.

Percentage of students, who were trained by HIP program and gave up smoking, is much higher than those who started smoking. The same is valid concerning drinking alcohol (except rather little group A3, where no significant difference between these indicators was found). It witnesses about the fact that HIP trainings help to reduce the prevalence of smoking and drinking alcohol habits among HEE students.

Summary

1. Among 1-3 year students harmful habits of smoking and drinking alcohol are rather frequent. In the process of study at HEE the prevalence and strength of these habits increase among RSS students. At present, physical culture classes are not the factor of harmful habits" prevalence among RSS students reducing.

2. It is necessary to introduce elements, which would facilitate reduction of harmful habits" prevalence among students, into content of physical culture classes for RSS.

3. Health improving practicum based on Tsi Gun facilitates reducing of prevalence and strength of smoking and drinking alcohol habits among SHG students and are more efficient in this respect than physical culture classes for RSS.

Our conclusions are rather preliminary. First of all, this research has not considered that in our HEE physical culture classes for RSS are organized by specializations: students can chose either general physical training or any of special trainings (power training, swimming, shaping, fitness or out door games) in compliance with their preferences. It is necessary to clear up the influence of specialized trainings on prevalence of harmful habits among RSS. Secondly, small size of smoking and drinking alcohol groups of students, who attend in-class HIP trainings for more than one year as well as those, who fulfill HT, does not permit to receive statistically confident results of calculations and make accurate conclusions concerning the differences between different groups of questioned SHG students, who are trained by HIP program.

The prospects of further researches. It is necessary to continue this research in order to obtain statistically more confident results.

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