

The involvement of medical and biological specialties' students for the prevention work on smoking, alcoholism and drug addiction among young people

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Abstract. in the article the experience of the organization of the problematic group of the students of medical and biological specialties for conducting educational work with the young people on the preventive of alcoholism, drug addiction and tobacco smoking is represented. In the process of work students created electronic systematic complex on the basis of information technologies "To help tutor and teacher of educational institutions in the organization of educational work on prevention of drug addiction, alcoholism and tobacco smoking". In the process of its approval various forms of educational preventive work with the students and the schoolboys were carried out.

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Introduction

The problem of alcoholism, drug abuse affects many countries of the world. This is especially relevant for the youth, so it is important to carry out preventive measures among young people. Different countries of the world solve this problem in different ways. Mostly prevention measures include physicians' work, a creation of non-profit organizations against drugs, alcoholism. These institutions create special sites concerning their work.

For example, National Institute on Drug Abuse (NIDA) is situated in Bethesda, Maryland, USA [1]. NIDA's mission is to lead the Nation in bringing the power of science to bear on drug abuse and addiction. This charge has two critical components. The first is the strategic support and conduct of research across a broad range of disciplines. The second is ensuring the rapid and effective dissemination and use of the results of that research to significantly improve prevention and treatment and to inform policy as it relates to drug abuse and addiction.

Adolescence is a critical time for preventing drug addiction. As noted previously, early use of drugs increases a person's chances of more serious drug abuse and addiction. Risk of drug abuse increases greatly during times of transition, such as changing schools, moving, or divorce [2]. If we can prevent drug abuse, we can prevent drug addiction.

The institute offers a broad range of science-validated programs for youth and adults which are to help people with drug addiction. The term "science-validated" means that these programs have been rationally designed based on current knowledge,

rigorously tested, and shown to produce positive results. For example, NIDA's *Preventing Drug Use among Children and Adolescents: A Research-Based Guide for Parents, Educators, and Community Leaders*, can significantly reduce early use of tobacco, alcohol, and illicit drugs.

These prevention programs work to boost protective factors and eliminate or reduce risk factors for drug use. The programs are designed for various ages and can be designed for individual or group settings, such as the school and home [3].

Such programs help teachers, parents, and healthcare professionals shape youths' perceptions about the risks of drug abuse. While many events and cultural factors affect drug abuse trends, when youths perceive drug abuse as harmful, they reduce their level of abuse.

Communities That Care (CTC) is another coalition-based community prevention operating system that uses a public health approach to prevent youth problem behaviors including underage drinking, tobacco use, violence, delinquency, school dropout and substance abuse [4].

Ultimately, the beneficiaries of CTC are children of any age in the community. Results from a 7-state experimental trial involving 24 communities show that within 4 years of adopting the CTC system, community coalitions can reduce the rate of new delinquent behaviors and of alcohol, tobacco, and smokeless tobacco use as well as the overall occurrence of alcohol use, binge drinking, smokeless tobacco use, and delinquent behavior among young people community wide by the spring of grade 8. The Center for Communities That Care is part of

the Social Development Research Group, School of Social Work, University of Washington.

In Atlanta, Georgia the Centers for Disease Control and Prevention (CDC), through the Office on Smoking and Health (OSH), is situated [5].

It is the lead federal agency for comprehensive tobacco prevention and control. OSH is a division within the National Center for Chronic Disease Prevention and Health Promotion, which is located within CDC's Coordinating Center for Health Promotion.

Originally established in 1965 as the National Clearinghouse for Smoking and Health, OSH is dedicated to reducing the death and disease caused by tobacco use and exposure to secondhand smoke.

Smoking harms nearly every organ of the body, causing many diseases and affecting the health of smokers in general [6]. The Office on Smoking and Health (OSH) helps states and communities implement tobacco control programs by featuring national and local campaigns and events, linking to state and community resources, producing guidelines, and compiling data.

In Russia we came to the conclusion that to organize a preventive work with youth the efforts of physicians, community organizations and special sites are insufficient. For the organization of prevention of drug addiction, alcoholism, and tobacco smoking among youth it is necessary to attract students – future teachers, future physicians, and University professors, Tutors and teachers – educators in schools. When designing M.A. (Master of Arts) academic program “Pedagogical Education” there must be planned the disciplines, aimed at forming competencies related to the cultural-educational activity, which includes prevention of drug addiction, alcoholism and tobacco smoking [7; 8; 9; 10].

In the North-Caucasian Federal University information technologies are widely applied in educational process [11]. In the Institute of Living systems the idea to use the potential of students of “Medical biochemistry” and “Biology” specialties for the organization of work on prevention of drug addiction, alcoholism and tobacco smoking among youth on the basis of information technologies arose. Thus, problematic group on the application of contemporary information technologies in the process of conducting educational work with the students and the schoolboys on the preventive maintenance of drug addiction, alcoholism and tobacco smoking was created. The students and masters degree candidates of department “Medical biochemistry”, “Biology” entered into the group.

Materials and methods

The main problem group consisted of 12 students of 1 - 4 courses of the specialties “Medical

biochemistry”, “Biology” of the Institute of Living systems of the North-Caucasian Federal University. For the collection and processing of the data in addition to the basic groups of students any interested person were involved. For the separation of duties, students were divided into micro-groups: Informants; Generators of ideas; Technical executors; Presenters (table 1) [12].

Table 1. Functional role obligations of the participants of micro-groups

Functions			
Informant	Generator of ideas	Technical executor	Presenter
The search of necessary information on the chosen research theme	Generator of new ideas while processing the information, author of presentations' sketches	Creation of electronic complex on the basis of the collected material	Project presentation on the seminar class, organization of discussions with a group of students in the process of introducing the project

In the process of work on various projects, students could change their roles, but the basic functions in the group remained.

When developing electronic complex the students used the following materials:

- content of research works of students on studying of influence of narcotics, nicotine, alcohol substances on the organism (performed by students of the Department of Medical biochemistry);
- information obtained during the analysis of the scientific literature;
- information obtained from Internet sites.

Currently, in many regions of Russia, there are no common electronic anti-drug, anti-alcohol resources. But an informational resource “Stop drugs” could be one of the examples [13]. The study of anti-drug Ru-Net resources allowed identifying the site as one of the best examples in meaningful and technological terms. This resource exists since 2000. One of its doubtless advantages is a huge amount of original information on different topics, grouped in a user-friendly form. Some of this information was used by the students to collect materials.

While approving electronic complex at the educational activities 300 students and schoolchildren were involved.

While working on creation of electronic complex and holding different activities on prevention of drug addiction, alcoholism and smoking among youth, we used the following methods: observation, interrogation, the method of projects; demonstration (slides, photographs, the posters), the method is not finished proposals, the method of expert estimations, mathematical data processing.

Results

Joint efforts of a group of students of specialties “Medical biochemistry” and “Biology” led to the creation and testing while educational activities e-methodical complex “To help tutor and teacher of

educational institutions in the organization of educational work on prevention of drug addiction, alcoholism and tobacco smoking” on the basis of the Adobe Flash Player 11. The complex is intended for educational preventive work with the students of 9-11 grades, students of different specialties, undergraduates, postgraduates.

Purpose of the complex: to render a systematic assistance to moderators, class leaders and to other persons who are interested in taking of the measures, directed to the preventive of drug addiction, alcoholism and tobacco smoking among the young people.

The tasks of complex consist in the assignment to the organizers of educational work:

- the information material, concerning questions of the history of the appearance of the ruinous predilections of man to the use of different psycho-active substances; the nature of the directed action of these substances on the organism; the consequences of the use of narcotics, alcohol and tobacco;
- slides to an information material, photographs, which make it possible to present material in a maximally visual form;
- the selection of the posters on the anti-narcotic, anti-alcoholic and anti-tobacco theme, which contain interesting ideas, which can be realized during the formulation of educational measures, during the organization of the competition of posters in the training establishments;
- diagnostic set of instruments for the development of tendency toward the appearance of drug addiction, alcoholism and tobacco smoking.
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- diagnostic set of instruments for the development of tendency toward the appearance of drug addiction, alcoholism and tobacco smoking.

The structure of electronic complex consists of 5 parts: information text material, slides to this

material, photographs, posters, and tests. The educational potential of the structural components of electronic complex is represented in table 2.

Table 2. Educational potential of the electronic complex

№	Structures	Educational potential of the given structure
1.	Information material	Is picked up proceeding from as much effective as possible and at the same time accessible verbal influence for consciousness of youth
2.	Slides	Strengthen effect of the information material by influence not only on acoustical, but also on the visual analyzer of perception of the information
3.	Photographs	Make it possible to act effectively on the emotional sphere of students, activating the negative feelings, which appear with the direct contemplation of the consequences of the use of different psycho-active substances
4.	Posters	Activate the processes of the formation of negative motivation to the use of different psycho-active substances, as they are executed in the course of youth subculture and “expressive means” are used in them, these means in the language accessible for the young people make it possible to act effectively on consciousness and feelings of adolescents and youths (fig 1, 2, 3)
5.	Tests	Contribute to the appearance of reflection in young people relative to tendency to alcoholism, drug addiction and tobacco smoking



Fig 1. The anti-drug poster

The approval of electronic systematic complex was accomplished by students of specialties “Medical biochemistry” and “Biology” in the process of organizing of the educational activities with the schoolboys and students of other departments of the North-Caucasian Federal University (Stavropol) and Stavropol State Agrarian University and also with the teachers of educational establishments of Stavropol and the Stavropol region. As a result of analysis of the results of approval, we came to the conclusion that the complex can be used in various forms of training and educational process. Teachers highly estimated the educational possibilities of the complex and use it effectively both on the lessons (biology, chemistry) and in the process of taking educational measures. The obtained results indicate the relevance of the complex.

In the process of the approval of complex we, students and the master’s degree candidates, used it during the organization of the following forms of educational work with the students and the schoolboys:

- Lecture agency with the application of information technologies on the problem of the preventive of alcoholism, addiction, tobacco smoking;
- Project competition on the basis of information technologies on the theme of the preventive of alcoholism, addiction, tobacco smoking;

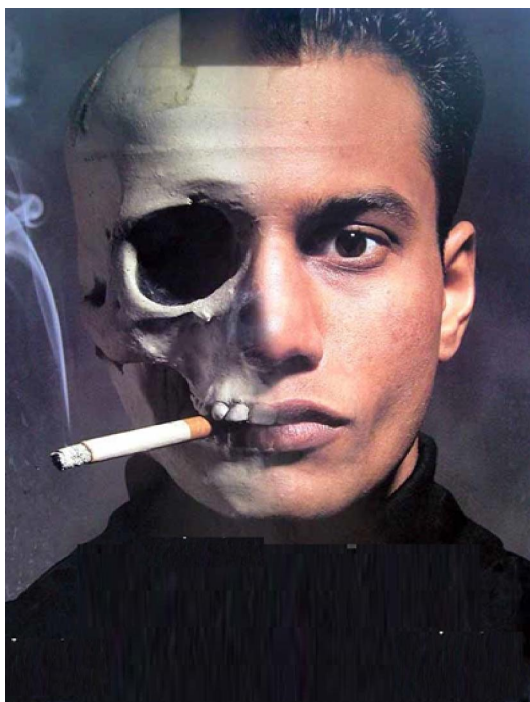


Fig 2: Poster «I died because of the smoking»



Fig 3: Poster

- Competition of the posters of the anti-narcotic, anti-alcoholic, anti-smoking content;
- For the holding monitoring on the theme of predisposition to the taking drugs, alcoholism, etc.

- Use of fragments of complex for holding the meetings with the parents.

After the measures held by us, teachers and students - organizers of measures, the effectiveness of electronic systematic complex "To help to moderator and class leader in the organization of educational work on the preventive of addiction, alcoholism and tobacco smoking" was studied.

For studying the effectiveness of the influence on the schoolboys and students, obtained as a result of a demonstration of projects, we used the method of the unfinished proposals, in the process of which the listeners were proposed to answer the questions:

1. During the survey of the presentation it was new for me:
 - Most of the information;
 - Part of the information;
 - All the information is familiar to me.
2. Especially I was struck during the survey of _____
3. Information, obtained by me during the survey:
 - Will be very useful for me and it will, possibly, promote the giving up the harmful habits;
 - Will be taken into consideration;
 - Possibly, will help to avoid the appearance of dependences in the future.

As it follows from the results of interrogation, especially struck photographs, information about female and beer alcoholism, forms of alcoholism, action on the organism "light" narcotics and others. The distribution of answers to questions is represented in tables 3 and 4.

Table 3. Results of the answers of schoolboys and students to a question "During the measure it was new for me ..." (%)

Groups of schoolboys and students	Degree of the novelty of the information		Most of the information		Part of the information		All information is familiar to me	
	n	%	n	%	n	%	n	%
Schoolboys of the 9 th grade of the secondary school №25, Stavropol, n = 88	35	39,8	41	46,6	12	13,6		
Students of the 1-2 courses of the North-Caucasian Federal University, n = 140	43	30,7	72	51,4	25	17,9		

Table 4. Answers of schoolboys and students to the question: "The information, obtained by me during the measure..." (%)

Groups of schoolboys and students	Degree of the usefulness of the information		It will be very useful for me		It will be taken into consideration		Possibly, it will help to avoid the appearance of the dependences in the future	
	n	%	n	%	n	%	n	%
Schoolboys of the 9 th grade of the secondary school №25, Stavropol, n = 88	38	43,5	21	23,9	29	32,6		
Students of the 1-2 courses of the North-Caucasian Federal University, n = 140	51	36,6	56	39,9	33	23,5		

Conclusion

By such means it is apparent that measures with the usage of electronic systematic complex were rather effective, they interested schoolboys (students). That great work made, which is not finished and will continue, had an enormous value in the formation of social competence in students and masters degree candidates, who took educational measures. This work promoted the formation of:

habits of search, selection, systematization and integration of information on prevention of drug addiction, alcoholism, smoking from different sources – scientific literature, special sites on the Internet;

skills to create and demonstrate projects, events for young people on the prevention of drug addiction, alcoholism;

skills to transform the scientific knowledge on medicine, obtained as a result of research work, into scientific popular, accessible for understanding of listeners of different age classes;

communicative habits: the skill to interact with different audiences: teenage, youthful; the skill to convince, give information effectively, etc.

ability to use personal potential for the creation and realizations of socially significant projects.

We consider that in many respects the positive results were achieved due to the association of the efforts of students, master's degree candidates, teachers, the scientists in the organization of educational measures of preventive directivity on the basis of innovation technologies.

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