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***THE ISSUES OF CHILDREN'S AND TEENAGERS' HEALTH
PRESERVING IN EDUCATIONAL INSTITUTIONS***

The contemporary civilization has entered a new informational era. Social and cultural environment undergoes radical changes; new cultural norms, living, education, work, health and rest standards emerge. The above mentioned realia encourage a new era man formation: the kind of man that would possess all the optimal reserves of adaptation possibilities, providing him/her with a secure life in the highly dynamic conditions of the modern informational society [1].

The adaptation potential of the younger generation in Russia is limited, as far as the level of children's and teenagers' health goes down annually. In the recent century the statistics of children's health has been quite depressing, and it has been closed for the public use up to the late 80s. Today the statistical data of the health care institutions provide us with the information on children's health in different subjects of RF, but the results of population studies in all the regions of Russia are not published. Besides, the real numbers are rarely analyzed, instead they usually compare the present rates of the disease incidence with those of the previous years. For example, in 2011 report "Basic indicators of mother's and child's health, childhood and obstetrics protection service in Russian Federation" Ministry of Health Care and Social Development of Russia points out that primary disease incidence with children of 0-14 years old has increased by 9.97% within the recent 5 years, with children of 15-17 years old by 21-44% [2].

President V. V. Putin noted out in his speech on March 13, 2013: "We are facing extremely worrisome tendencies. At the age of 14 two-thirds of Russian kids have chronic medical conditions, a half has cardiovascular and respiratory system dysfunction. Up to 40% of the conscripts are unable to meet the minimum requirements of the physical qualification necessary in the army" [3; 17].

There are a number of factors that cause children's health level decrease: living standards' decrease for most of the population, environmental situation worsening, healthcare system weakening on the whole, its preventative sector deficit in particular, the lack of health culture in the society, low motivation in the people for observing healthy lifestyle norms and principles.

Medical hygienic and psychological pedagogic researches of the two previous decades emphasize negative role of the *school factors* in the development of children's psychic and somatic problems. These factors, caused by school environment and educational process on the whole, fully effect children over a long period of time, throughout all the period of education and lead to their social and psychological adaptation malfunction.

The researches of the Age Physiology Institute of RAE show that the number of medical conditions increases most drastically at the ages of 7-10 and 12-17. In the secondary school the number of eyesight diseases increases 4-5 times, the number of diseases of the digestive apparatus grows threefold, the number of neuropsychic disorders – twofold [4].

Unfavorable influence of the following school factors on the learners' health has been researched.

Because of the exponential growth of the information flow, the number of information provided at school inevitably grows too. It causes *the intensification of educational process* (real decrease of the number of in-class studies while the number of the learning material stays the same or increases). During the whole period of education a schoolchild constantly feels the lack of time. Irrational organization of the learning process (the length of a school day (6-8 lessons), break time decrease up to 5-10 minutes, a lot of tests, huge home assignments, breach of sanitation norms and etc.) violates the regular dynamics of the children's efficiency and performance. The introduction of USE aggravates the situation. Most senior students have optional classes (from 2 to 6-8 hours per week) with private tutors.

Children do not get enough rest. On average they spend only 15-30 minutes outdoors, 80-90% of schoolchildren lack 1.5-2 hours of night sleep. It negatively influences the functional condition of a developing body: the processes of growth are hampered, puberty endocrine control is distorted. The constant lack of time causes overall functional and emotional tension, increased anxiety, development of neurotic disorders, emerging of psychosomatic syndromes and diseases symptoms.

Stress tactics of pedagogical impact also contributes *to the learners' emotional problems* (violence effect, inadequate requirements, rudeness, humiliation, verbal attacks). In classes with an authoritarian, rough, spiteful teacher current disease incidence is three times bigger and the number of emerging neurologic disorders 1.5-2 times bigger than in classes with a calm, attentive, benevolent teacher (while all the other educational conditions are equal) [5].

Teachers' stressful impact on learners becomes victimogenic. As the result, children start developing communicative pedagogical traumatism. Some learners try to compensate for emotional discomfort at school with smoking, drinking alcohol and taking drugs.

In such a situation psychological help for both teachers and students is necessary, but in most educational institutions today there is not a psychologist on the staff. An issue of the restoration of the psychological service at schools, that has been almost destroyed, is being raised.

Schoolchildren's health is also significantly *undermined by the educational methodologies and technologies incompatibility with learners' age, gender and functional capabilities*.

Doctor-physiologist V.F. Bazarnii underlines the following negative elements of the recent Russian school reforms that lead to the "school stress" development [6]:

— establishing the curriculum according to the instructively programmed, "disciplinary-compulsory" left cerebral hemisphere, while ignoring the functions of the creative, emotional right cerebral hemisphere; almost complete expulsion of the full-fledged labor, art, music and physical upbringing from the basic academic curriculum;

— implementing gender neutral informational didactics that dulls adequately natural emotional responses, and as the result impedes the development of gender adequate imagination, emotions, fancies, senses. It leads to the discord of the process of sex and personal differentiation;

— establishing the educational process on base of cursive writing with the ball pen; introducing reading standards –assessment of the speed of reading, but not of understanding of the meaning of what is read;

— replacing height-adjusting school furniture with non-adjusting one; replacing angled surface of the desks, perfect for visual perception, with the horizontal one, distorting the letters' perspective; replacing optimal electric lighting with the flickering fluorescent one that affects the brain negatively and etc.

A significant factor causing life potential deficit in a growing child is the restriction of motion activity at school – education on "seats" (V.F. Bazarnii). It leads to the body activity suppression and the restriction of power load on the whole locomotive and musculoskeletal system. Consequently, children develop osteoporosis (when bones bound ionized calcium escapes in blood) and locomotive cells and tissues, vessels and internal organs calcification. Reproductive performance is being destroyed because of the musculoskeletal system rigidity, deformation of small pelvis organs, congestive and inflammatory processes in the small pelvis, degradation of reproductive seed, disorganization of the delivery force and etc. The complex of pathologies emerging during the education on "seats" is defined as child *fatigue syndrome* (CFS) that gradually transforms in *the intravital body mummification syndrome* (IBMS) [6].

To prevent these conditions it is necessary to find educational methodologies and technologies that would comply with age, gender and functional capabilities of the learners. This problem should be solved on the level of healthcare and education ministries as well as on the level of the exact educational institutions.

A professional and competent teacher today is required to know and be able to prevent school factors harmful for children's health. Though nowadays there are no unified (state) administrative guidelines for providing health preserving activities at schools.

One of the ways to prevent the development of syndromes connected with schoolchildren hypokinesia and hypodynamia is to gradually and constantly increase power load on the musculoskeletal system. That is why the organization of active

physical activity of children at school is so important, though it is mostly unsatisfactory in Russian educational institutions.

The factors impeding children's involvement in physical training and health-improving activities might be divided into *objective* (the lack of material and technical provision, outdated methodological base, staff deficit, inaccessibility of sport facilities for most children because of the low living standards of the family), and *subjective* (low learners' motivation to go in for sports, preference of the passive forms of rest (watching TV, playing computer games, communicating in the social networks and others), lack of the understanding of importance of health, caused by family upbringing (when parents ignore healthy life style, demonstrate health-destructive behavior).

The FSES of the compulsory education presupposes the forming of the learners' conscientious attitude to health while studying the following subjects: a) "Physical Education", studying it a learner "forms and develops principles of an active, ... healthy and secure life style", "develops as a physical, emotional, intellectual and social personality..."; b) "Basics of Safety and Survival", the purpose of this subject is to "form the principles of healthy lifestyle without drinking alcohol, smoking and taking drugs"; c) "Biology", as the result of studying it a learner develops the skills "to choose such life aims and guidelines that would encourage one's own and others' health, rational organization of one's work and leisure"; d) "Chemistry", studying it a learner forms a skill to "analyze and plan environmentally secure behavior in order to preserve health" [7].

As the result of studying these subjects young learners are supposed to acquire theoretical knowledge about healthy life style, but acquiring such knowledge does not lead to automatic development of healthy life style (HLS) skills. A teacher is supposed to provide active participation of the learners in the process of preserving their own health; meanwhile the education is based on the experience, opinions and knowledge of the members of the class. The following methods are used to achieve this goal: in-class discussion, stories, debates, "brainstorming", role play, and work in small groups, training game, practical training of some life skills in the definite situations and etc.

To monitor the quality of education and the issues of health being studied, it is reasonable to include pedagogically adapted knowledge about health in learning and test materials and tasks for the formative and summative assessment of the learners (FCE, USE). In order to do this all the teaching staff have to have knowledge about health.

In fact, *teachers often lack competence* in the issues of preserving their students' health and forming their health culture. A teacher might be brilliantly competent in his subject, but at the same time be unaware of age-related and individual peculiarities of a child and his abilities. It is the consequence of the teacher-training and re-training system that provides minimum and obviously insufficient information on age-related physiology and psychophysiology of children and teenagers; and thus, limits teachers' skills on making learning process health-preserving. It should be

noted that a teacher, according to his\her professional and social role, is more than just a carrier of special knowledge. He\she is also a living illustration of moral values, exemplary behavior, healthy life style and adequate attitude to health. But in everyday life most teachers do not follow the principles of health-aware behavior.

Consequently, new Federal Standards should form a health-preserving and health-developing competence in educators and would-be teachers and all other specialists who work in educational institutions. This requirement explains the introduction of the special courses (“Psychology of Health”, “Pedagogy of Health”, “Health-Preserving Technologies in Education”) in the educational standards of teacher-training universities, and the search for new organizational forms of professional advancement and re-training of teaching staff. Thus, the normative base, regulating health-preserving activities in education, should be considerably upgraded.

The health-preserving activities in educational institutions are regulated today by the Federal law of December 29, 2012 № 273-FL “About Education in Russian Federation” (further on – FL). In particular, article 41 of the FL asserts that learners’ health is protected through security provision, first aid, immunization, epidemiological surveillance, programs of early disease detection and prevention [8].

However, at school learners’ rights for medical service are violated, as far as often only one nurse works in an educational institution. So, she has time only to cope with the preventative immunization. While the main requirement for the efficient health care activity, stated in the FL “About Education in Russian Federation”, is that pediatricians should carry out medical and preventative work in an exact educational institution throughout the whole school day. The need to organize school health care on the base of a children clinic, maybe in a form of a department of “Students’ Disease Prevention”, becomes highly relevant [9].

Though, one’s health mostly depends on many other factors rather than the development of health care. According to WHO experts, human health depends on medical aid and hereditary factors only by 30%, while one’s life style – health-enhancing or health-impairing individual practices, norms and principles, influences health by 50-70%.

But the younger a child is, the more his health depends on the natural and social environment. That is why the following health-preserving strategies are used in children educational institutions today: hygiene-preventative (carried out through the reasonable organization of learning process); sporting and health-improving (using the means of PE for physiological development of kids); medical and rehabilitation (learners’ health is improved through medical measures: pharmacological, physiological, phyto- psychotherapeutic and therapeutic exercise, etc.). Educational aspect is also being developed. Special attention is being paid to a child’s personal experience of health- preserving, while emphasis is being laid on the correlation between the formed health-preserving motives and relevant age-related demands for conscientious attitude to health.

Often these measures are uncoordinated and disconnected, as far as there are not any specialists on staff of the educational institutions who would be responsible for systematized and complex health-preserving activities, focusing interdisciplinary resources for the solution of the exact tasks on preserving, developing and creating learners' health.

Recently, significant financial funding has been provided to support health care and education in Russia. Measures to preserve and improve health of the young generation have been declared on the state level. According to RF Presidential Decrees ("About National Strategy of Actions on Behalf of Children 2012-2017", "About Demographic Policy Measures in Health Care", May 7, 2012 № 606, "About State Policy Improvement in Health Care", May 7, 2012 № 598), RF State program "Development of Education" for 2013-2020, conception of long-term social and economic development of Russian Federation up to 2020, national initiative "Our School", and Federal State Educational standards for compulsory education, the following tasks are considered relevant today:

- to form learners' culture of healthy and secure life style; to revive and preserve moral and civic traditions;
- to develop and improve the results of the programs on preventing alcoholism, smoking, drug-addiction;
- to develop physical education and sport;
- to create innovative educational system for preserving and improving learners' health;
- to train and re-train teaching and managing staff; to improve cooperation between educational departments and sectors, and scientific and methodological provision of educational institutions with the materials on health-preserving.

The scholars who deal with the issues of health-preserving in education in the different regions of Russia have been voicing the above mentioned problems and the ways to solve them for 20 years now. For example, on May 23, 2013 a round table "The Issues of Health in the System of Compulsory Education: Problems and Legislation" was held in the State Duma. The following initiatives have been put forward [10]:

The State Duma Committee of the Federal Assembly of the Russian Federation on Education is to develop legislation on preserving and improving learners' and teachers' health.

The Ministry of Education and Science of RF is:

- to develop unified national criterion to assess the activity of educational institutions meant to preserve and improve learners' health;
 - to introduce physical health monitoring in order to optimize sporting and health-improving activities of the learners and assess its health-improving efficiency;
 - to create organizational managing structures (of Federal and regional centers) that would constantly monitor learners' physical development and qualification with the help of population monitoring technologies;
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— to regulate health-preserving activity in educational institutions of different kinds and types (regulation of school meals, medical service, teaching, etc.);

— to improve teachers' professional competence in the issues of preserving and improving learners' health;

— to prepare guidelines about educational and medical institutions' joint realization of "Federal requirements to the educational institutions on learners' health protection", approved by the RF Ministry of Education and Science 28.12.2010 № 2106;

— to develop mechanisms of cooperation with the public organizations in order to promote and improve the efficiency of the activity preserving and improving learners' and teachers' health in educational institutions;

— to develop a state special-purpose program "Scientific Methodological Provision of Health-Preserving Activity in Educational Institutions" that would provide financial support through grants for teacher-training universities;

— to improve educational CEOs' (federal and regional levels) competence in the issues of preserving and improving learners' and teachers' health through the professional training courses.

The Health Care Ministry of Russian Federation is:

— to create Single automatized system of monitoring the learners in educational institutions in order to introduce efficient objective control over learners' health and physical development;

— to introduce changes in the "staff norms of medical personnel" in order to provide medical service for all learners of educational institutions during the educational process;

— to adjust current legislation in order to provide the presence of health care workers in educational organizations throughout the whole day of studies;

— to increase the efficiency of medical control over the educational process organization, physical upbringing, learners' meals, sanitary condition of educational institutions;

— to develop a number of health-preserving technologies, recommended for educational institutions;

— to provide the preparation of annual national reports on children's health in Russian Federation based on the results of medical examination.

The Ministry of Sports and Tourism of Russian Federation is:

— to promote work on learners' physical upbringing in educational institutions;

— to develop and approve approximate norms of training and competitive physical loads for learners of comprehensive schools who also attend school sport clubs;

— to assist implementation of innovative health-enhancing and sporting technologies in educational institutions;

— to develop a Statute about the terms of fees for health-improving and sporting services in the system of governmental and non-governmental organizations.

The heads of the governmental agencies of the subjects of Russian Federation managing the field of education are:

— to develop the system of re-training and professional advancement of the teaching staff within the frames of FSES HVE implementation;

— to develop the motivation system that would encourage PE teachers to work out and implement innovative teaching programs, methodologies and technologies in the educational process;

— to develop volunteer movement in order to create the efficient mechanisms of learners' participation in solving the problems connected with health-enhancement;

— to provide financial assistance for development and purchase of the scientific, methodological, learning materials on preserving and improving learners' health;

— to create informational and methodological database of innovative programs, methodologies, health-preserving educational technologies, PE technologies, and PE teaching technologies that are used and developed by the educational institutions in the system of compulsory education;

— to introduce to educational institutions the practice of estimate of funds economization through the implementation of health-improving programs and systematized work;

— to promote preventative work on taking drugs, smoking, drinking alcohol;

— to organize professional training courses on the issues of learners' health-preserving for the heads of schools and pre-school educational institutions, the heads of municipal departments of education.

The heads of the institutions of higher professional teacher-training education are:

— to develop the complex of measures to enforce the system of higher teacher-training education in the aspects of preserving and improving learners' health, of improving PE teachers', psychologists', counselors' training and education;

— to work out the methodology to assess efficiency of health-preserving technologies that would be implemented in educational institutions;

— to develop and implement complex programs on preserving and improving health of the students of teacher-training institutions through annual monitoring of their health.

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