



# The Holistic Model of Health and Methods of its Evaluation



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## Abstract

Over the past 15 years, the demographic and epidemiological situation in Russia has been characterized by unfavorable trends, expressed in an increase of noninfectious diseases associated with negative environmental and school factors, unhealthy lifestyles, rising suicides, etc. Among young people, such risk factors as various forms of dependent behavior, the use of alcohol and drugs as a mean of avoiding life problems, are returning to widespread use.

**Keywords:** Demographic; Epidemiological; Narcotic Drugs; Psychotropic Substances; Neuropsychological; Athletes

## Introduction

There are a lot of factors determining the decrease of health of young people: social-economic state, intensive school mental loads, low level of knowledge concerning health, etc. In these conditions, the main direction of the domestic policy is the formation and protection of the children's health as the basis for improving the future of the country. A special role in the solution of these issues should be played by schools and universities, where the formation and development of the individuals is taking place. Unfortunately, the modern education system cannot ensure the fulfillment of these tasks in an effective manner.

Therefore, one of the main tasks of Russian schools and universities is to minimize these demographic and social threats, especially paying attention to their systematic solution. At present, there are a number of normative and legal documents that determine the compulsory estimation of student's and pupil's health in educational institutions. There are some of main orders, devoted to assessment of health of school children and students in Russia:

a) Federal Law "On Education in the Russian Federation" dated December 29, 2012, No. 273 (with amendments and additions, intro. effective from 01.09.2020).

b) Order of the Ministry of Education and Science of the Russian Federation No. 7 dated 12.01.2007 "On the organization of health monitoring of students, pupils of educational institutions".

c) Order of the Ministry of Education and Science of the Russian Federation dated December 28, 2010, No. 2106 "On approval of federal requirements for educational institutions in terms of health protection of students, pupils".

d) Sanitary and hygienic requirements and safety requirements (SanPiN 2.4.2.2821-10); "Sanitary and epidemiological requirements for organizations of education and training, recreation and health improvement of children and youth" SP 2.4. 3648-20 of 28.09.2020.

e) Order of the Ministry of Education and Science of the Russian Federation dated 06/16/2014 No. 658 "Procedure for conducting socio-psychological testing of persons aimed at early detection of non-medical use of narcotic drugs and psychotropic substances".

From this perspective, it is especially important to create electronic tools to monitoring the dynamics of physical and mental health of students, to reveal people with a propensity for different psychosocial dependencies and suicidal behavior. It will allow provide timely correction and treatment of pupils and students. Based on these documents, we developed e-passports for the health monitoring of participants in the educational process (school children, students, etc.).

In the basis of the methodological approach to estimate human's health, we put the following principles:

a) A holistic approach to the body, which is based on the idea of the unity of the physical (somatic), mental and social-moral levels of a person, ensuring the integrity of the organism, its ability to satisfy its biological, spiritual, and social needs.

b) The organism and its environment are a whole system, which determines mutual influences on each other.

c) The level of health can be estimated quantitatively, if taking into account the level of reserve capabilities of the organism to preserve the homeostasis of its internal medium during adaptation to the constantly changing conditions of the external environment (or loads).

d) The child's organism goes through growth and development, therefore, the parameters characterizing his health change in ontogeny. So, when the health of children and adolescents is estimated, it is necessary to take into account not only the presence or absence of any signs of disorders and diseases, but their changes in the process of life and learning.

e) In case of the health characteristics, an integrative approach is important, taking into account the dynamics of the physical development, functional, psycho-emotional state of the organism and the learning environment, which should be health-preserving.

These principles formed the basis for our computer programs for monitoring the health of subjects of the educational process, which consist of 3 interconnected units that allow one to estimate:

a) the physical development and functional reserves of the organism-physical health.

b) the state of the psychological sphere (emotional, strong-willed, cognitive, intellectual, personal) - mental health.

c) the evaluation of moral-spiritual health as fulfilment of duties and laws.

The programs can be used in local option by institute or school, or in online while saving all the results in the database on the organization's server or on the regional server of the Ministry of Education or Health, which allows one to analyze the results in any format (by sex, age, etc.).

Therefore, monitoring of health is a dynamic quantitative screening diagnostic of:

a) Physical development and Functional state of different organs and systems and their reserves possibilities.

b) Neuropsychological state.

c) The level of socio-psychological adaptation to different conditions of life.

d) Ecological and sanitary-hygienic conditions of learning

and life environment.

The purpose of health monitoring of students:

a) To preserve and to develop the health of students in the process of individual development and learning.

b) To evaluate the health-preserving activities of the educational institution.

c) To organize the individual approach to the teaching.

d) To correct the educational programs and teaching to achieve the greatest effectiveness.

e) To determine the risk groups of addictive behavior.

We developed the next programs as electronic passports of health for:

a) Pupils

b) Recruits

c) Students

d) Athletes

e) Teachers

Electronic passports of health are characterized by the following advantages:

a) Integrative approach to health as a systemic state, including indicators of physical, mental, and social levels.

b) Computerization of all data, which makes it possible to create a health bank of various age-sex and professional groups.

c) Quantitative expression of parameters, providing the possibility of dynamic observation and comparison of the health level of various groups, educational institutions, districts, etc.

d) Relative simplicity of examination, which does not require expensive equipment.

e) Possibility to transmit survey results via the Internet.

f) Involvement of the subject in the examination process, which increases his personal interest in preserving and developing health.

g) The ability to predict the risk of developing addictive forms of behavior associated with a propensity for psychosocial dependences.

Thus, the computer tool allows to evaluate various components of the health of young people, on the basis of which to form an electronic passport, which can be used for individualization of the educational process and prompt correction of health and behavioral disorders.



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