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**PHYSICAL HEALTH (DEFINITION, SEMANTIC CONTENT,  
STUDY PROSPECTS)**

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*Abstract*

Deteriorated health of children, adolescents and young people in Russia drives teachers of secondary and higher educational institutions to enhance the educational process of physical education of younger generation to improve their health. However, there is one obstacle which prevents teachers from accomplishing this task, i.e. there is no clear understanding of what physical health is; what the semantic content of this concept is and how it can be used to improve educational process regarding physical education. Existing definitions of health and physical health from the scientific literature are rather streamlined. They reflect the view point of specialists of various branches of scientific knowledge without revealing factors that determine them. They do not focus attention on ways and methods of their research, which does not ensure development of quantitative criteria and standards for their evaluation. The authors of the article propose an updated definition of physical health, which shows its dependence on four main factors, reveals two main ways of study and evaluation, becomes the basis for development of regional standards for different groups of population, which will make the education process more student-based regarding physical education, taking into account an objective assessment of these parameters. In addition, it was shown that physical health should be treated with regard to the individual development of a person, basing on what the target setting should be changed during physical trainings.

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**Keywords:** Physical health, physical education, physical preparedness.



## **1. Introduction**

Over the past 10-15 years, the health status of student youth in the Russian Federation (Zheleznyak, Leifa, & Perelman, 2015) has significantly worsened, i.e. almost 2 times. So, in 2005 – 2007, the number of students of the IRNTU engaged in physical training in the health function group III comprised 20-25%; then in 2017 - 2018, their number in the “problem” (II - IV groups) groups was already over 40%. Health analysis among students indicates that the diseases of cardiovascular system take the first place, the diseases of musculoskeletal system (osteochondrosis, scoliosis) are on the second place and respiratory organs diseases are on the third place.

All this raises serious concerns not only about their future professional engagement, but also about their health, life expectancy, birth of healthy offspring, etc. Essentially, this problem is of state importance, which results in the acute task setting, i.e. the enhancement of the educational process regarding physical education of students in order to improve their physical health (Martynyuk & Vilyansky, 2015; Pashchenko & Krasnikova, 2017). This task is especially important for HEI academic staff (primarily the departments of physical culture). Moreover, due to the workload, not always comfortable living conditions, psycho-emotional stresses, irregular and unbalanced diet, lack of exercise, bad habits, etc. have a negative impact on their health.

## **2. Problem Statement**

In order to conduct a detailed study of this problem, one must clearly understand what is physical health, what is its essence, what are the medical and biological bases, as well as the means and methods, the ways of the most effective impact on it, and what will we have in the future?

## **3. Research Questions**

The term health has over 400 interpretations (in the scientific literature) that bear either a philosophical and methodological connotation or reflect a separate point of view of specialists from various branches of scientific knowledge (biology, genetics, medicine, hygiene, cybernetics, etc.), which makes it possible to create a fairly clear idea of it.

However, understanding the essence of this definition (physical health) is not so simple, although this phrase consists of two words that have an important semantic meaning, i.e. “health” is a generalized characteristic and “physical” is associated with person’s physical capacity.

## **4. Purpose of the Study**

The purpose of this study is to bring changes to the definition of the term “physical health” on the basis of study and evaluation of characteristics of physical development and physical fitness of student youth, taking into account the determining factors, as well as individual aspects of human development.

## 5. Research Methods

The analysis of scientific and professional literature. The study of parameters (Koipysheva, Rybina, & Lebedinsky, 2015; Lebedinsky et al., 2017) of physical development (weight, height, chest circumference, dynamometry, VC, functional tests, blood pressure, heart rate), as well as physical fitness (shuttle run, standing long jump, 20-meter run, bent suspension, 1,000-meter run, push-ups, sit-ups, falling leaf exercise within 30 seconds).

## 6. Findings

If to consider several definitions of physical health of a person, it becomes clear that according to various authors this concept is usually presented syncretically, while the scientific interpretation of this term says that health (WHO) is a state of complete physical, mental and social well-being, but not just the absence of any disease. Physical health is a dynamic state, the process of preserving and developing its biological, physiological and mental functions, optimal work capacity and social activity with the maximum life expectancy.

According to the Explanatory Dictionary of the Russian Language, physical health is a normal state of properly functioning, undamaged organism. Other authors claim that physical health is the result of a balance between the internal and external relations. In addition, it is noted that physical health is a normal function of an organism at all levels, a normal course of biological processes ensuring individual survival and reproduction, a dynamic balance of an organism and its functions with the environment, participation in social activities and socially useful work, a performance of basic social functions, absence of diseases, painful conditions and changes, body's ability to adjust to constantly changing conditions of the external environment. Besides, it is noted that physical health is the body's ability to adequately change its functional indicators and maintain optimality in different conditions, which is the most typical criterion of its norm.

All these definitions are rather streamlined and do not completely reflect its bases, do not disclose the factors that determine it, do not emphasize the ways and methods of its study, which does not allow to develop clear quantitative criteria and standards for its evaluation in order to establish more effective and objective educational process regarding physical education (especially) of children, adolescents and young people.

Lebedinsky et al. (2017) offer a new definition of physical health: it is "genetically determined motor capacity of a person (physical preparedness), which during his/her life undergoes sound changes in the process of morphofunctional adaptation (physical development) to the changing conditions of the external environment and life activity".

Basing on this definition it becomes clear that physical health, as well as health in general depends on four main factors: 1. Genetics (heredity) (18-22%). 2. Health status (8-10%). 3. The state of the environment (17-20%). 4. Person's mode of life (49-53%). Besides, its level is determined by the ability of a person to adjust to these factors.

In addition, two main ways of its study and evaluation are identified: 1. physical examination, which is conducted using anthropometric and physiometric methods of study, and 2. testing of motor qualities, i.e. physical preparedness (Koryagin & Blavt, 2016).

In case the characteristics of physical health parameters are properly determined, it will make it possible to develop regional standards for physical development and physical fitness of various groups of population. Moreover, it will be an unbiased estimate, which will ensure the development of student-based approach in the educational process (Germanov, Stradze & Sabirova, 2018) regarding physical education (especially) of younger generation.

It becomes clear that physical health must be taken into account with regard to the stages of individual development of a person, which is divided into three different phases. Taking this fact into account the targets for physical exercises in the physical education process should be changed: stage 1 (development from birth to the mature age) – the formation and development of physical health; stage 2 (maturity) – strengthening of physical health; stage 3 (involution - older age groups) – preservation of physical health.

At the same time, the priority of human life and health, as a fundamental principle of state policy in the field of education, is proclaimed in the law of the Russian Federation on Education, the Doctrine for Modernization of Education and other important decrees concerning education and upbringing of younger generation. In the framework of the Federal Target Program Youth of Russia (2001-2005) physical health monitoring was the initial stage in the implementation of the state project the Establishment of All-Russian System for Monitoring Physical Health of Population, Physical Development of Children, Adolescents and Youth. In 2001, the Government of the Russian Federation had adopted the Decree No. 916 “On the All-Russian Monitoring System”.

Application of such monitoring system has to be in place to achieve real results, when improving physical education of younger generation, and, consequently, in health formation in general. With its help a rapid response to the changing conditions of person’s life is carried out; besides, comprehensive measures are taken to make the impact of unfavorable factors of the external environment insignificant and their prevention is aimed at strengthening the health of the nation.

Provided such system is properly operated, there should be developed a healthy, economically and socially active human population, which is capable of expanded reproduction, high-performance at work and social development of society in the longer term.

At the same time, in 2014, a new list of tests was approved and standards for the All-Russia Physical Culture and Sports Complex “Ready for Labor and Defense” (GTO) were developed. GTO is the normative basis for physical education of the population of the country aimed at the development of popular sports. However, in connection with the proposed definition of physical health, it seems problematic to conduct an isolated examination of test results of motor qualities only which are proposed in the regulatory documents.

It is conceivable that for a more objective and full-fledged assessment of the physical health of all groups of population it would be more advisable to conduct a set of GTO standards and monitor their physical development in a complex.

## **7. Conclusion**

Based on the analysis of the results obtained, it is shown that physical health should be treated with regard to the individual development of a person, basing on what the target setting should be changed during physical trainings (health formation, development, strengthening and preservation).

## Acknowledgments

An updated definition of physical health reveals two main ways of its study and evaluation. It may serve as the basis for development of regional standards in relation to physical development and physical fitness of various groups of population, making the process of education more student-based regarding physical education.

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