

5 (6) December, 2019

ISSN 2641-9823

GLOBAL ACADEMICS

International Journal of Advance Researches

Quarterly Issue # 5 (6):

*Actual Problems of Psychosocial Health of
Students in the Modern School*

www.i-journal.org

GLOBAL ACADEMICS

International Journal of Advance Researches

*The Journal has been added to the Library of Congress electronic resource database.
Control No.: 2019201864.*

Editor and Publisher:

World War III Prevention Project, Corp.

Editorial Board:

Igor Gorkiy

Chief Editor, Doctor of Political Science,
Vice-President, World War III Prevention Project, Corp.

Yuriy Safonov

Doctor and Professor of Economics, Deputy Director of the Institute for the Modernization of the Content of Education, Kyiv Ukraine

Yevgen Maslennikov

Doctor and Professor of Economic Sciences, Department of Economics and Management, Odessa I.I.Mechnikov National University, Odessa Ukraine

Tetyana Semigina

Doctor and Professor of Political Science, Vice-Rector for Research, Academy of Labor, Social Relations and Tourism, Kyiv Ukraine

Ihor Vdovychyn

PhD in Political Science, Professor - Head of the Department of Theory of State and Law, Lviv University of Trade and Economics, Lviv Ukraine

Lyudmyla Moskalyova

Doctor and Professor of Pedagogical Science, Vice-Rector - Bogdan Khmelnytsky Melitopol State Pedagogical University, Melitopol, Zaporozhye region, Ukraine

Yurii Zavalevskiy

Doctor and Professor of Pedagogical Science, First Deputy Director of the Institute for the Modernization of the Content of Education, Kyiv Ukraine

Executive Editor:

Maksim Gorkii

Authors:

Bagatska N., Berezhna T., Danylenko H., Matkovska T., Mykhailova I., Shcherbakova O.,

Svetz A.

The issue of the journal is dedicated to surveys of the psychosocial health of schoolchildren, which is a fundamental problem in the education and formation of a healthy generation. The authors of the articles express their views on the solution of this problem.

Contents

Shcherbakova O. <i>Development of Positive Thinking of Students of Basic School as a Method for Forming Psychosocial Health.</i>	4
Berezhna T. <i>Health-Saving Technologies in Educational Institutions of Ukraine.</i>	15
Danylenko H, Svetz A. <i>Formation of the Professional Competence of Youth Through Professional Events in the System of Professional-Technical Schools.</i>	23
Mykhailova I. <i>Psychological Characteristics of Anxiety and Depressive Disorders of Art-Diagnostics in Children When Choosing Therapeutic Tactics of Intervention.</i>	35
Bagatska N. <i>Features of the Chromosomal Apparatus in Adolescents with Depressive Behavioral Disorders.</i>	44
Matkovska T. <i>Some Peculiarities in the Mental Health Status of Children with Non-Toxic Diffuse Goiter.</i>	50

**DEVELOPMENT OF POSITIVE THINKING OF STUDENTS OF BASIC SCHOOL AS
A METHOD FOR FORMING PSYCHOSOCIAL HEALTH**

Olena Shcherbakova,

PhD of Psychological Sciences, Senior Researcher,

State Institution «Institute for Children and

Adolescents Health Care of the National Academy

of Medical Sciences of Ukraine», Kharkiv, Ukraine

Abstract.

The article reveals the psychological peculiarities of positive thinking and the formation of the psychosocial health among base school student in terms of innovative education. Socio-psychological preconditions of positive thinking formation were characterized. Existing relationship between the development of positive thinking and the formation of the psychosocial health among base school student were determined.

Keywords: positive thinking, critical thinking, mental health, social health, psychosocial health, younger adolescents.

Significant steps have been taken in the years of independence in Ukraine to reform education and create conditions for shaping the health of the younger generation. State National Programs "Education" ("Ukraine of the 21st Century"), "Concept of Continuous Valeological Education", Laws of Ukraine "On Education", "On General Secondary Education", "On Childhood Protection", "On Physical Culture and Sports", " The National Doctrine of Educational Development " defines the need for the work of comprehensive educational institutions on the education of conscious attitude of children and adolescents to their own health and the health of other people, preserving, strengthening, restoring the health of students. Thus, in particular, the scientific-pedagogical project "Intellect of Ukraine" promotes the development of positive thinking and the formation of psychosocial health of primary school students.

In today's scientific research, the problem of health is considered as one of the most important problems of the whole complex of human sciences. However, despite considerable efforts to shape the mentally and socially healthy younger generation, the health of children in Ukraine is deteriorating today. Already in early school age, each child has about two diseases. Various forms of school maladaptation, intellectual deficits, socio-stress and neurotic disorders are characteristic. The peculiarity of the formation of health of modern schoolchildren is the adverse impact of chronic psycho-emotional overload, which negatively affects the health [2; 4].

The analysis of pedagogical theory and practice shows that there are contradictions between the actuality of forming a healthy generation, which is fixed by the legislation of Ukraine, and the persistent negative tendencies in the health of the student youth, from the beginning; the need for systematic work on the formation of mental and social health of younger students and the lack of pedagogical factors and conditions of the process; identifying the leading role of educators and parents in shaping the health of younger students and their lack of competence in this issue.

It should be noted that the current situation, characterized by unpredictable socio-political processes, instability of social guarantees, requires the individual to respond flexibly and adequately, above all, to the use of positive thinking resources. This thinking involves the creation of an individual's own positive, success-oriented program, taking into account the complex reality and adequacy of its perception. In the context of contemporary changes in society, the need to study the nature and features of the development of positive thinking in the growing up period is actualized [3; 5].

According to the analysis of modern scientific literature, various aspects of positive thinking and psychological health are the focus of many scholars. Researchers view positive thinking through the positive attitude of the individual to reality (V. Bobritska, T. Gordeeva, R. Anthony, R. Kashapov, F. Kaloshin, I. Kirillov, M. Lapukhina, M. Licheva, M. Molts, N. Peseshkian, N. Peel, O. Romakh and others) and in the energy aspect (V. Azarov, V. Borodkin, A. Ignatenko, R. Callahan, A. Meneghetti, N. Peel, R. Russell, G. Sitin and others). In modern Ukrainian psychology, positive thinking is seen as conducive to the physical and mental health of the individual (V. Bobritskaya, F. Kaloshin, S. Symonenko) [5; 8].

The concept of psychological health in the understanding of scientists emerges as a complex phenomenon; researched in the works of modern scientists (I. Dubrovina, A. Shuvalov, N.

Kolotiy, K. Riff). One of the important components of psychological health is the vitality of the individual, as the ability to withstand the challenges of life, to respond to the challenges of life (S. Maadi, D. Leontiev, I. Razkazova, T. Larina). We can talk about the relationship of vitality with the concept of "positive thinking" close to psychological health.

There are studies that confirm the impact of positive thinking on mental health (V. Kaloshin). Features of the discourse of positive thinking are studied (L. Kirichuk). At the same time, at the theoretical level, this category has not been studied enough.

In the thematic field of modern research on the preservation and promotion of human health, the formation of healthy lifestyles should be called scientific works in the field of pedagogy (O. Dubogay, O. Ionova, S. Kyrylenko, Y. Lukyanova, etc.), medicine (M. Amosov, G. Apanasenko, M. Goncharenko, G. Serdyukovskaya, V. Yazlovetsky and others), psychology (M. Bitanova, V. Garbuzov, I. Dubrovina, G. Nikiforov, etc.); philosophical and medical-biological provisions on the relationship of biological, mental, social determinants of health (G. Apanasenko, I. Brehman, A. Maslow, Yu. Lisitsyn, etc.); concepts of mental health (M. Bitanova, O. Vasiliev, I. Dubrovina, S. Maksimenko); research on healthy lifestyle formation (S. Boltivets, N. Denysenko, I. Sinita, V. Orzhekhovskaya) [2; 4; 7; 8].

The specificity of positive thinking is not fundamentally studied in early adolescence, whereas projecting into the future, increasing intellectual capacity, forming adolescents' self-esteem, and having a positive impact on the psychosocial health of primary school students gives reason to define this age stage as a sensitive period of life. conscious use and growth of its potential (G. Abramova, I. Beh, I. Bulakh, L. Vygotsky, L. Dolinskaya, I. Kon, I. Kulagina, T. Lysyanskaya, S. Maksimenko, A. Mudryk, N. Povyakel, E. Pomitkin, Y. Prikhodko, A. Rean, V. Rybalka, M. Savchin, M. Smulson, L. Friedman, etc.) [1]. Highly appreciating the importance of the conducted research in the field of pedagogy and psychology, it is important to emphasize the need to continue scientific research in the chosen direction.

In view of this, **the purpose of the article** is to theoretically substantiate the psychological features of the development of positive thinking and its influence on the formation of psychosocial health of primary school students.

At the present stage of human development, the health of the nation is regarded as an indicator

of the civilization of the state, reflecting the socio-economic status of society. However, today scientists (M. Amosov, M. Goncharenko, G. Ivanova, S. Kirilenko, etc.) state a significant deterioration in the health of the young generation of Ukrainians. When attending school, 80% of children have somatic health disorders. There is an annual decline in adolescent mental health. The incidence of mental and behavioral disorders has increased by 8% in recent years, and today the number of children with nervous and sensory diseases is 1.3 million. Significant complications in the social development of students are observed: problems of teenage aggression, culture of communication, social conformism have become acute and relevant. The problem of social adaptation of children and adolescents with regard to educational groups is exacerbated, there is a tendency towards a constant increase in the alienation of adolescents from their parents, teachers, and therefore from society as a whole. Among the factors that led to the anthropological catastrophe in Ukraine, scientists say, in particular, a number of factors related to the low level of motivation for a healthy lifestyle and culture of health in a large part of the population of Ukraine, aggressive social environment, problems of sexual education, growth the number of young people who abuse tobacco, alcohol and drugs, the spread of HIV, etc. [4].

As we can see, the problem of preserving and promoting the health of the young generation of Ukrainians is complex, and its solution requires uniting the efforts of school, family and the public, all interested central and local executive authorities and local self-government.

The problem of health, one of the most important theoretical and practical problems of the complex of human sciences, has attracted and attracted the attention of many leading scientists both present and past. At the same time, throughout the history of civilization, the reference concept of health has evolved from its ancient understanding as an internal harmony inherent in a healthy person (Hippocrates, Socrates, etc.), to modern anthropocentric views on health as a state of complete physical, spiritual and social well-being, not just the absence of disease and physical defects (UN Resolution No. 38/54, 1997). However, efforts to delineate the boundaries of health and disease, to determine the phenomenological and ontological aspects of their manifestation, have remained indispensable.

To sum up, let us note that for modern science, character is a holistic view of health as a phenomenon that integrates at least four of its spheres: physical, mental, social and spiritual. These components of health are interconnected and interdependent, acting simultaneously and, as a

result, their interaction and determining human health.

It should be noted that most researchers (M. Bityanova, V. Garbuzov, etc.) consider the mental health of the individual as a state of mental equilibrium, characterized by the absence of morbid mental manifestations and providing adequate regulation of behavior and activity. The main criteria for the evaluation of mental health are: the conformity of subjective images to the objects of reality and nature of reactions - external stimuli, the significance of life events; adequate level of maturity level of personal emotional-volitional and cognitive spheres; adaptability in microsocial relationships; the ability to self-manage behavior, to reasonably plan life goals, and to support activity in achieving them [2].

With regard to the concept of "social health", the majority of scientists (G. Apanasenko, M. Goncharenko, Y. Lisytsyn, V. Shkurkina, etc.), emphasizing the leading role of social factors in the formation of health population, emphasize the legitimacy of the concept of "health" in social categories [4]. At the same time, scientists (V. Shkurkina and others) define social health as follows: "Social health of the individual is a state of harmonious functioning of the person in the main types of interaction: social, economic, political, ideological on the basis of mutual understanding. , mutual acceptance, mutual respect, mutual assistance, a condition that promotes self-actualization of the person, creates comfortable relations with reality and causes a qualitative leap of spiritual development of the person in the process of socialization.

It should be noted that in the process of preserving and promoting human health, none of its components can be an end in itself. Only a holistic approach is effective in solving the tasks of improving the physical, spiritual, mental and social components of personal health.

The 'health' category is intrinsically linked to the concepts of 'healthy lifestyle' and 'health culture', since the latter is the result of the formation of a healthy lifestyle, and is a prerequisite and effective way of maintaining and promoting health.

In the reference literature, the term "lifestyle" is defined as a concept that characterizes the peculiarities of people's daily lives. In this context, scientists (A. Rybakovsky et al.) Understand the term "healthy lifestyle" as a form of daily life that meets the hygiene rules, develops the adaptive capacity of the organism, promotes the successful restoration, maintenance and development of its reserve capacity, full of value. social fulfillment of social and psychological

functions.

Note that thinking is central to the structure of personality, determines its behavior, shows the ability to predict events. Our society needs people who are able to make non-standard decisions in difficult situations, anticipate the results of their own activities and think creatively and positively. As stated in the National Doctrine of Educational Development, it is necessary to ensure "... the formation of a modern outlook in children and young people, the development of creative abilities and skills of independent scientific knowledge, self-education and self-realization of personality." Positive thinking is involved in any activity of the individual, acting as its internal mechanism, the lever to determine the need for certain actions, ensuring the subjective well-being of the person. Through the behavioral aspect, motivational functions in thinking are realized. Important for the characterization of the behavioral component of positive thinking is the statement of V. Bobrytsky [6] of a person's personal growth, his or her movement to success and social well-being in case successes are confirmed and failures fulfill a corrective function. I. Beh [1] draws attention to the factual thinking of the personality (thought-actions). The behavioral component determines the ability of the individual to withstand the pressure of external circumstances, stimulating his / her activity when problematic situations are solved independently and responsibly by updating one's own capabilities.

How does one think of the positive thinking represented in contemporary scientific writings? As L. Kiryчук, "Positive thinking theorists, studying ways of self-realization of an individual, effective communication, ways of overcoming stressful situations and achieving the desired goal, emphasize the possibility of developing an optimistic worldview, approval of oneself and their surroundings, ability to find in any situation, favorable situations focus on them, placing them at the heart of a cognitive model of situation perception" [6].

Positive thinking is considered as the basis of the vitality of the individual and is necessarily creative (V. Kaloshin). This reveals his similarity with productive thinking (M. Wertheimer), which implies restructuring of the problem situation and its new perception.

Thus, positive thinking can be considered as a kind of thinking that unfolds as a constructive way of interpreting life experience, aimed at solving internal problems, which is closely related to the affective sphere of personality, has a positive effect on the psychological health of the individual.

Talking about positive thinking as a process of solving a certain internal problem, we will consider as its result the achievement of a certain well-being of the individual, his / her resource status, enhancement of his / her resilience, creation of such a cognitive model of a situation that would be optimistic, favorable in the end for life.

On the other hand, the explanation of the criteria of positive and negative is offered by L. Kirichuk as a representative of psycholinguistics. Considering the inextricable link between language and thinking, L. Kirichuk sees in positive thinking a certain program of action, a cognitive type of self-awareness of the individual, which involves the speech designing of any situation on the basis of the implicit form of "It is good". Thinking about life experiences through language, one resorts to evaluations of the objective world, presenting life events as favorable or unfavorable. [6].

Thus, the criteria of positive thinking can appear both at the level of fundamental value orientations of the person, connected with the tendency to life or death, creativity or destruction, and at the level of the linguistic environment with the inherent marking for it: "good-bad". That is, thinking aimed at realizing universal values and meanings that is unfolding in discourse using semantic categories that are perceived as favorable and constructive at the level of the linguistic society, can be considered positive.

Obviously, the socio-psychological prerequisites for the formation of positive thinking is the capacity for positive thinking, which is formed together with the formation of the "I-concept" of the individual (K. Rogers), its life scenario (E. Bern), with the formation and development of critical thinking (E. Bono) and the semantic sphere of the individual [3; 5].

The analysis of psychological sources proves that the most researched aspect of positive thinking is its connection with the emotional-evaluative worldview of the individual. It is mainly regarded as a positive attitude to one's self, thoughts, other people and environment (V. Bobritskaya, T. Gordeeva, R. Anthony, R. Kashapov, F. Kaloshin, M. Moltz, N. Peel and others). Therefore, the decisive for the functioning of positive thinking is the attitude of the subject to reality (N. Peseshkian, T. Tsigulskaya and others).

Positive emotions activate a person's desire for achievement, and therefore, optimize positive thinking, which ensures the success of further activities. This is especially relevant in the younger

adolescence, when with the qualitative changes in age there is a need to restructure the whole system of adolescent relationships with the environment, resulting in a new level of self-awareness. Positive thinking helps to build an adequate system of outlook and a holistic view of oneself, as well as the conscious choice of a further life path by the students.

In the study of positive thinking, we proceed from the provisions of the active theory of the relationship of thinking with other mental qualities of the individual, in particular emotional and motivational spheres, and consider it through vectority, namely: optimistic-positive focus on ourselves and finding the best ways to solve problems. Its basis is the ability to evaluate the negative through the prism of optimism and constructiveness (O. Romakh, M. Lapukhin), so the main function of positive thinking is the ability to find a positive component in any problem. Positive thinking contributes to the successful activity of the individual, and a positive attitude to reality, optimistic worldview facilitates the process of regulation of emotions [5; 8].

Thus, we propose to consider positive thinking as thinking, a set of qualitative characteristics of which causes the reflection of essential signs of objects and phenomena of reality, predicting the best ways to solve problems, ensuring optimism of the world view and motivation to achieve success by the readiness of individuals to be active.

As the study of the problem has shown, positive thinking relies on the resources of emotional, creative, realistic, and critical thinking. Relationships with creative thinking provide creative solutions to problematic issues, productivity and flexibility, with emotional and realistic - subjectivity of creative orientation of thought in mastering a problematic situation, with critical - analyzing information from the standpoint of a non-standard situation and making independent, prudent decisions on the basis of versatile thought-out arguments [3]. To the greatest extent, our vision of the phenomenon is closer to the concepts of sanogenic thinking (Yu. Orlov, N. Povyakel, V. Rybalka, etc.), emotional intelligence (G. Gardner, J. Mayer, E. Nosenko, A. Sannikova, etc.), emotional thinking (G. Mayer), as well as rational (A. Ellis), adaptive, mature (A. Beck), in which the mind and emotional orientation interact to change false ideas to overcome emotional and behavioral problems.

Revealing the essence of the phenomenon under study and clarifying the content helps to make connections with its related concepts. Conceptual apparatus includes three main areas of the psyche: cognitive, emotional, behavioral. Accordingly, to define positive thinking, we define such

basic concepts as attitude, positive perception, optimistic outlook, emotional judgments of evaluation, emotions with positive modality, personal creative orientation, faith, confidence, prognosis, reflection, motivation for success, setting, action which represent the categorical apparatus of the phenomenon under study and are its most characteristic features.

Structural composition of positive thinking in younger adolescents includes cognitive, emotional-evaluative and behavioral components that interact. Elements of the cognitive component - meaningful, reflective, predictive, emotionally-evaluative - optimism, positive attitude to self and reality, emotions with positive modality, behavioral - motivation to succeed and setting yourself for a productive transformation of reality. The basis for determining the optimistic-positive focus of the individual on himself and the world is the emotional-evaluative component. Thus, the elements of the positive thinking structure are combined with a relatively stable structure and a common function of maintaining orderly integrity.

From the works of scientists (I. Dubrovina, A. Shuvalov, O. Zavgorodnaya, A. Maslow) we came to the understanding of psychological health as a process of harmonious personal processing of life experience in the direction of self-realization of personality. As you can see, the concept of psychological health largely implies the ability to think positively. Instead, the formation of positive thinking promotes psychological health [6; 7].

It should be noted that in a number of students, optimism, positive attitudes to life were formed spontaneously, as a result of a certain type of character or conditions of upbringing in childhood and young school age. But there are also those who are pessimistic about life, have low self-esteem, negative attitude to the world and to the world and to others. This affects the students' well-being - they have a difficult adaptation in the transition period, difficult perception of stressful situations, ease of occurrence of depressive states. It also creates problems for them to communicate with their peers, in relations with teachers, and difficulties in communication in the family. Such students often seek the psychological help provided by practical school psychologists. The task of the psychologist - to show the various possible solutions to the problem of the student, perceived by him as negative, to demonstrate the relativity of the "good-bad". Within the framework of the scientific and pedagogical project "Intellect of Ukraine", understanding the importance of this problem, students in the base school are offered a separate subject - " Study together", one of the content lines of which is the development of positive

thinking.

Summarizing the results of scientific research has led to the conclusion that the development of positive thinking contributes to a more effective solution to situations of problematic nature and the establishment of psychological resistance to stressful living conditions, thus, ensuring the psychosocial health of base school students. The study does not exhaust the full depth of the problem.

References

1. Bekh I.D. (2003). *Vykhovannya osobystosti: u 2-kh knyhakh. Knyha 1: Osobystisno oriyentovanyy pidkhid: teoretychni ta tekhnolohichni osnovy*. [Education of personality: in 2 books. Book 1: A Personally Oriented Approach: Theoretical and Technological Foundations]. Kyiv, Ukraine: Libid. [in Ukrainian]
2. Bityanova M. R. (2004). *Organizatsiya psikhologicheskoy raboty v shkole*. [Organization of psychological work at school.] Moscow, Russia: Perfection. [in Russian]
3. Belkina O. (2003). Problema rozvytku krytychnoho myslennya molodshykh shkolyariv u suchasniy shkoli. *Shkola pershoho stupenya: teoriya ta praktyka, Issue 6*. [The Problem of Development of Critical Thinking of Younger Schoolchildren in Modern School. School of the First Degree: Theory and Practice.] - Pereyaslav – Khmelnytsky, Ukraine, 71 - 78. [in Ukrainian]
4. Goncharenko M.S. (1997). *Valeolohichne rozvantazhennya shkolyariv pid chas shkil'noho protsesu*. [Valeological unloading of schoolchildren during the school process.] Kharkiv, Ukraine: The Basis. [in Ukrainian]
5. Ivanik G.S. (2006). Shlyakhy rozvytku pozytyvnoho myslennya yak tsilisnoho utvorennia v systemi funktsionuvannya zahal'noosvitnikh shkil. *Molod', osvita, nauka ta fiz. svidomist': zb. materialy Vseukrayins'koho. Konf., Vol. 3*. [Ways of development of positive thinking as a holistic formation in the system of functioning of secondary schools. Youth, education, science and nat. consciousness: coll. materials of the All-Ukrainian. Research Practice Conf.] Kyiv, Ukraine: View of Europe. Univ., 91-93. [in Ukrainian]
6. Kirichuk L.M. (2004). Cognitive structure of the positive thinking discourse. *Philological*

Studies, 4, 149 - 155.

7. Maslow A. (2003). *Motivatsiya i lichnost'*. [Motivation and personality.] St. Petersburg, Russia: Peter. [in Russian]

8. Ulitko G.S. (2008). Zasoby psikhologichnoho vplyvu na rozvytok pozytyvnoho myslennya u chervni. *Student. Nauka., Vol. 4*. [Means of psychological influence on the development of positive thinking in June. Student. Sciences.] Mykolayiv, Ukraine: Mykolayiv State University V.O. Sukhomlinsky, 157-160. [in Ukrainian]

HEALTH-SAVING TECHNOLOGIES IN EDUCATIONAL INSTITUTIONS OF UKRAINE

Tamila Berezhna

Candidate of Pedagogical Sciences,

State Scientific Institution «Institute of education content modernization»

Kyiv, Ukraine

Abstract.

The article analyzed the different approaches to the understanding of the «health-saving technology». Disclosed the forms of saving health of the teenager in educational institutions. And also consider the appropriate mix of development opportunities, which should provide a quality educational environment to all actors of the educational process.

Keywords: health, health-saving technology, general educational institutions, teacher, younger teenager.

The statement of basic materials.

In recent years, the problem of health care for children and young people has become particularly acute in Ukraine.

It is known that the health of children has significantly deteriorated during their studies at a general secondary education institution. Deterioration of the physical and mental health of children is primarily related to environmental, economic, social problems in society.

In addition, this problem is due to factors at the level of educational institution, namely: emotional discomfort caused by difficulties in the educational process, overload of program material, difficulties in relationships in the system pupils - teachers - parents, lack of physical activity, lack of organization of leisure the introduction of a health system, lack of motivation for

healthy lifestyles and culture of health in children and adolescents.

This situation requires the introduction of a health education technology educational institution into practice, which is an important component of the health care environment and involves the interplay and interaction of all factors of the educational process aimed at preserving and promoting the health of children and adolescents.

Our study focuses on adolescents. According to the researchers M. Akimova, V. Kozlova, N. Menchinska, a considerable part of the students in the transition to the second-grade school loses interest in the education, which is connected with adulthood in physical, mental and social relation, in addition, the number of educational subjects increases, instead of one class teacher, the subject teachers work with the children. At this age, the basis of a teenager's life is school, study, relationships with friends, friends, parents, and educators.

They need not only the acquisition of knowledge, but also comfortable conditions for learning and education. In this regard, the teaching staff of the educational institution is tasked with forming a health-saving environment, conducive to the formation of a harmoniously developed, physically perfect personality.

Researcher O. Podgirna understands the concept of "health space" as a multilevel educational system and socially organized educational environment, in which the priorities are: healthy lifestyle, health culture, forecasting health care activities [7, p. 31].

We agree with N. Miller argues that a health-saving educational environment contributes to the introduction of health-saving learning as a process of interaction between students and teachers, which results in the acquisition of knowledge, skills, creative methods, values and education of participants' health process [5, p. 18].

In recent years, health-care pedagogical technologies have become actively implemented in teaching and practice. With their help, teachers form the knowledge, skills, skills and consciousness, organize the space of activities and determine the life orientations of adolescents.

The concept of "health-saving technology" covers all areas of activity of the educational institution in forming a culture of students' health, positive motivation for a healthy lifestyle.

By definition to V. Kovalko, educational technology of health education pedagogy is the

process of reproduction of pedagogical actions from the arsenal of pedagogical and methodical tools within the framework of teacher-student communication, which is carried out through the systematic use of forms, means and methods providing obtaining planned results taking into account the goals and objectives of health education pedagogy [4, p. 17].

Researcher M. Smirnov identifies several groups among health saving technologies implemented in the education system: health and hygiene technologies, physical and health technologies; environmental technologies as well as technologies that guarantee the safety of life and health-saving educational technologies [6, p. 21]. According to the author, health-saving educational technologies should be recognized as the most important in terms of the impact on the health of students [6, p. 21].

Scientists believe that health-saving educational technologies should be considered as all pedagogical technologies that do not harm the health of students, creating safe conditions for stay, study and work in school, namely:

- favorable conditions of education of the child at school (absence of stressful situations, adequacy of requirements, appropriate teaching and training methods);
- optimal organization of the educational process (according to age, gender;
- individual characteristics and hygienic standards;
- full and rationally organized motor mode;
- education of students of a positive attitude to a healthy lifestyle [6, p. 4].

Researcher I. Erokhina defines the concept of "health-saving technologies" in education as a set of forms, means and methods aimed at achieving optimal results in maintaining the physical, mental, ethical and social well-being of a person in shaping a healthy lifestyle [2, p. 165].

According to the researchers O. Vashchenko and S. Sviridenko, the concept of "health-saving technologies" combines all the spheres of activity of the educational institution in the formation, preservation and improvement of students' health [1, p. 3].

Among the health technologies that are traditionally used in the system of educational institutions, there are five main types: health, health, environmental, recreational, life safety, health-saving technologies [3, p.18].

Each of these technologies has its own methodology, methods, forms, though in the end they are all aimed at preserving and promoting the health of the immediate participants in the educational process.

The essence of health-saving technologies lies in the complex characterization of the conditions of education and training that allow to keep available condition and increase the higher level of health of adolescents, develop healthy lifestyle skills, monitor individual development indicators, predict possible health changes and undertake appropriate psycho-pedagogical, corrective, rehabilitative measures to ensure successful educational activities, improve the quality of life sub of the educational environment.

The first place in this group is occupied by medical and hygienic technologies, which cover:

- control and assistance in ensuring proper hygienic conditions in the educational establishment in accordance with the legislative and regulatory acts of the respective ministries and departments;
- conducting vaccinations to younger adolescents and providing emergency counseling and assistance in extreme cases;
- organization of sanitary and hygienic education of pedagogical staff and adolescents;
- monitoring the dynamics of adolescent health;
- organization of preventive measures on the eve of epidemics (influenza) [3, p. 20].

Physiotherapy and health technologies are aimed at the formation of a physically advanced personality with high motivation for a healthy lifestyle. In content, these technologies imply the development in adolescents of such qualities as hardness, endurance, speed, flexibility.

Ecological health-saving technologies aimed at creating environmentally friendly, environmentally friendly living conditions and activities for teachers and students directly in the educational setting (school area, indoor plants, greenhouse and living room).

Health-saving technologies are divided into three main types: organizational-pedagogical, psychological-pedagogical and educational-educational. With the help of organizational and pedagogical technologies determine the structure of the educational process, organize its participants, create a comfortable psychological climate in the student and pedagogical teams. Psychological and pedagogical technologies have a special meaning within differentiated and

individual approaches. They are most often associated with the direct activity of the teacher, his influence on adolescents. Life-support technologies include compliance with occupational safety, fire safety, civil defense, and the like.

Educational and educational technologies include programs for the education of caring for one's own health and the formation of a culture of adolescent health, adherence to healthy lifestyles, prevention of bad habits, educational work after lessons, education of parents [3, p. 61].

The practice of educational institutions of Ukraine certifies that health-saving technologies are implemented through the following directions of educational activity:

- 1) creating conditions for promoting the health of adolescents and their harmonious development;
- 2) organization of the educational process;
- 3) implementation of programs for forming a culture of health and prevention of bad habits;
- 4) medical-psychological-pedagogical monitoring of the health, physical and mental development of adolescents;
- 5) functioning of the service of psychological assistance to teachers and children, friendly relations in the team;
- 6) control over observance of sanitary and hygienic norms of organization of educational process; normalization of educational load and prevention of teenage fatigue;
- 7) organization of a balanced diet of adolescents in an educational institution.

Studying the available in pedagogical theory and educational practice of health-saving technologies makes it possible to establish that they are the most effective for implementation in educational institutions of Ukraine. For example:

health-saving technologies include thematic seminars and pedagogical councils, advanced training for teachers, adherence to a rational schedule of lessons, tracking of certain norms of homework, conducting integrated lessons, creating a favorable psychological climate and mandatory situation of success, organization of psychological trainings with children, teachers, parents;

health preservation and promotion technologies include mobile sports games, relaxation, finger gymnastics, salt bags, eye gymnastics, leaflets and health diaries;

medical and hygienic health-saving technologies - this is a regular medical examination of children and teachers, informing parents about the need for additional medical examination of children, conducting physical training minutes, monitoring the morbidity of students, functioning of the medical office, wet cleaning;

fitness and health technologies include monitoring of physical fitness of children, complexes of medical gymnastics, training in the gym, sports clubs and sections, mobile games;

ecological health-saving technologies are hiking on nature, valeological excursions, making and placing of feeders, bird houses in winter, work on school flower beds, ecological landings;

- correction technologies are based on art therapy, fairytale therapy, technologies of musical influence, influence of color;

- technologies for teaching healthy lifestyles will include: conducting communication games, discussions, lectures, trainings, parent and club work, organizing a parent university, activities of creative groups, wellness decades, hours of communication, sports, mass, physical and health events, cooperation with parents public organizations.

Considering the practice of educational institutions - Health Promotion Schools have determined that the introduction of such technologies encourages teachers to:

- comprehensive planning of important tasks of activity of educational institution on the basis of health saving;

- a holistic approach to the problems of preserving and promoting the health of children;

- determination of norms of training loads;

- formation of teachers' health-saving competence, self-education in health issues;

- creating a health-care environment at the institution;

- ensure cooperation with parents through mutual support and mutual assistance.

Conclusions.

The conducted analysis of health-saving technologies makes it possible to conclude that in Ukraine there is a scientific search in order to increase the efficiency of the process of forming a healthy way of life of students in the context of forming a health-friendly environment for children in educational institutions.

Health education and training technologies are being introduced in Ukrainian educational establishments, and an active search for a universal model of educational and preventive work system for education of children, their parents and teachers is positive motivation for healthy lifestyle, attitude to their own health as the highest social value.

An integrated approach can solve the problems of preserving and promoting the health of children, because it is the healthy person who is able to succeed in life, become a leader, a winner, a highly educated and highly cultured personality.

References

1. Vashchenko O. M., Sviridenko S. O. (2005). Organizing primary school health care activities. *Primary education, No. 46*. [in Ukrainian]
2. Erokhina I. A. (2005). *Zdorov'yesberegayushchiye tekhnologii v profilaktike narkomanii u podrostkov: Dis. Kand. Pedagogicheskoye nauki*. [Health-saving technologies in the prevention of drug addiction in adolescents: Dis. Cand. Pedagogical Sciences.] Tambov, Russia. [in Russian]
3. Kyrylenko S. V., Mykhailov, O. M., Serhiienko, V. P. (2012). *Shkola kultury zdorovia: vid sohodennia do maibutnoho : navch.-metod. posib*. [School of health culture: from the present to the future. Scientific and methodological manual]. Kyiv, Chernivtsi, Ukraine: Bukrek. [in Ukrainian]
4. Kovalko V. (2007). *Zdorov'yesberegayushchiye tekhnologii: shkol'nik i komp'yuter: 1-4 klasy*. [Health-saving technologies: schoolboy and computer: 1-4 grades.] Moscow, Russia: VAKO. [in Russian]
5. Miller N. (2006). *Ozdorovitel'nyye treningi dlya detey sanatorno-kurortnykh klassov obshcheobrazovatel'noy shkoly: Dis. kand. ped nauk*. [Health-saving training for children of

sanatorium classes of a comprehensive school: Dis. for the degree of cand. ped sciences.]

Novokuznetsk, Russia. [in Russian]

6. Smirnov M. (2006). *Zdorov'yesberegayushchiye obrazovatel'nyye tekhnologii i psikhologiya zdorov'ya v shkole*. [Health-saving educational technologies and psychology of health at school.]

Moscow, Russia: ARKTI. [in Russian]

7. Podgornya O. (2005). *Proyektirovaniye zdorov'yesberegayushchego prostranstva v obshcheobrazovatel'noy shkole s pomoshch'yu lichnostno-oriyentirovannogo obucheniya: Dis.*

Kand. Ped Nauk. [Designing a health-saving space in a comprehensive school by means of a personality-oriented education: Diss. Cand. Ped Science.] Tiraspol, Moldova. [in Russian]

8. Tikhomirova L. (2004). *Teoreticheskiye i metodologicheskiye osnovy zdorov'yesberegayushchey pedagogiki: Dis. Dokt. Ped. Nauk*. [Theoretical and methodological

foundations of health-saving pedagogy: Diss. Doc. Ped. Sciences.] Yaroslavl, Russia. [in Russian]

**FORMATION OF THE PROFESSIONAL COMPETENCE OF YOUTH THROUGH
PROFESSIONAL EVENTS IN THE SYSTEM OF PROFESSIONAL-TECHNICAL
SCHOOLS**

Heorhii Danylenko

Doctor of Medicine, Professor,

State Institution «Institute for Children and

Adolescents Health Care of the National Academy

of Medical Sciences of Ukraine», Kharkiv, Ukraine

Alina Shvetz

Competitor, Department of Hygiene

of Children of School Age and Teenagers,

State Institution «Institute for Children and

Adolescents Health Care of the National Academy

of Medical Sciences of Ukraine», Kharkiv, Ukraine

Abstract.

A professional competence of professional-technical schools graduating student is the difficult integrated concept, not taken to one only knowledge to or abilities, or personality qualities. The analysis of different determinations of professional competence of the future of worker is conducted. A professional competence, reflecting in itself essence of professional activity, is character of both knowledge and abilities, and personality qualities of worker, necessary for his successful activity. Substantial changes in society, acceleration of rates of socio-economic

development stipulated the search of new conception of educating, reflecting these changes and oriented to reproducing of the qualities of worker, highly sought by a XXI century: mobility, dynamism, structuralness, professional competence. Only a competent, high-professional worker can produce quality products, render quality services in all spheres of labour activity. A professional competence can not be purposeful and effective without the presence of scientifically reasonable information about the specific of professions, their requirements to personality and psychophysiological qualities of a person. Ignorance of professional competence can have negative consequences at the choice of profession, profile of educating, at employment. Therefore in the modern terms of development and development of new paradigm of education attention increases to professional activity of worker, a professional competence comes forward quintessence of that in all variety of her displays. The indexes of success of professional competence in a country is plenty of the folded professional careers, rapid entrance of young people to the market of labour, developed system of additional education, on the whole satisfaction of young citizens of country by professional life, and, high quality of life on the whole. Note should be taken on circumstance that along with a term "professional competence" near on sense concepts are often used.

Keywords: vocational orientation, competence approach, professional competence, qualification, teenagers, professional preparation

Introduction.

Adopted in a number of European vocational education and training systems, the definition "competency-based learning" is a reflection of a worldwide trend toward higher education. One of the basic characteristics of modern civilization is that knowledge is becoming a key feature of the new economy.

The need for modernization of the Ukrainian economy today puts new emphasis on the implementation of state youth policy. First of all, it is expressed in an attempt to solve social problems of young people, to promote the acquisition of vocational education and profession. Recently, the issues of vocational orientation of the younger generation, the need to improve vocational guidance with young people have been increasingly raised. It is because problem of forming professional competences of young people is solved through vocational guidance. The

organization and improvement of vocational guidance in the professional-technical schools system are issues of the first line importance [1,2].

Today, due to the high mobility of the market structure, every person will often have to change not only their place of work, but also their specialty and profession, that is, a specialist must be professionally mobile. The development of production technologies has led to a significant change in the qualification requirements for employees. In the conditions of "stable instability", which characterizes the labor market, the socio-economic system as a whole and has the consequence of accelerating the pace of knowledge aging, the question becomes, what, in fact, should be the object of standardization in education and what is the optimal volume its invariant components. Modern education should be oriented towards becoming a socially and professionally active person with high competence, mobility and professionalism. In addition to technological training of a specialist, an important factor in the development of education should be the formation of such personality features as independence, the ability to make responsible decisions, creative approach to any business, the ability to learn constantly, communication skills, the ability to cooperate, social and professional responsibility, etc. Emphasis on the professional development of personality determines the pre-eminent nature of professional education. Professionally conditioned personality qualities will provide "education for life." Those components of education that will be useful to graduates of professional-technical schools (and employers) in the practical development of new types of professional activity in the near and distant future should be invariant. These components will play a crucial role in enhancing the professional mobility of young employees. Thus, we can say that we are talking about new professional qualities of future specialists, adequate to the interdependent and fast-changing world, and, in particular, to accelerate the pace of knowledge aging [3,4].

The choice of profession begins with the school years. Therefore, vocational guidance among the upper classes should be carried out on an ongoing basis. An important role here is played by both the school and institutions of vocational education.

Regarding this fact, it is important to organize a social partnership between professional-technical school and the school, as the school guides the younger generation to choose a profession, and professional-technical schools develop the professional competencies of the individual. There is a definite basis for such a partnership. Both the school and professional-

technical school see it as working together on youth guidance. Thus, the social function of the school is to form a well-developed personality who has social competence, able to find and realize himself in the society. Professional-technical school is also interested in increasing the number of vocationally oriented young people, consciously making the choice of profession. This is necessary to improve the professional level of professional-technical schools students who are beginning to work in the production field and to develop their professional competence.

The concept of "competence" comes from the Latin word "*competere*" - to answer, to approach. In modern practice, the term "professional competence" most often defines the ability of an employee to perform tasks in accordance with set standards.

The traditional education paradigm, aimed at generating knowledge, skills and competences, combined with the inevitably simple expansion of curriculum content and increasing workload for professional-technical schools students, creates only prerequisites for knowledge formation. Traditionally acquired knowledge help only to memorize and reproduce the information conveyed by the teacher, but do not allow students to gain understanding of the facts and ability to interpret them, to combine educational material in order to obtain a holistic perception of reality. The traditional approach does not provide an opportunity to evaluate quality on the basis of such indicators as the graduate's readiness for future professional activity, the level of professional motivation, the characteristic of the outlook.

The widespread appeal today to the concepts of "competence" and "competence approach" is not a blind copy of Western trends [5].

In domestic professional science, "qualification" is defined as the degree and type of professional training of an employee, which implies that he has the knowledge, skills and skills necessary to perform a certain type of activity [6].

Components of professional competence and its place among other types of young people competence.

The main components of professional competence are:

- 1) socio-legal competence - knowledge and skills in the field of interaction with public

institutions and people, as well as possession of techniques of professional communication and behavior;

2) personal competence - the ability to continue professional development and professional development, as well as to realize themselves in professional work;

3) special competence - the ability to solve typical professional tasks and evaluate the results of their work, the ability to independently acquire new knowledge and skills in a specialty;

4) autocompetence - adequate understanding of their socio-professional characteristics and ownership of technology to overcome professional destruction;

5) Extreme competence - the ability to act in suddenly complicated conditions.

Professional competence, which is expressed in the ability to act successfully on the basis of practical experience, skills and knowledge in solving problems of professional activities have particular importance for becoming a future specialist. Its formation should be started at school and continued at professional-technical schools.

Orientation to the competence approach has now been regarded as one of the most important areas of development of national education. At the same time, the concepts of "competence" and "professional competence" are central, as they most fully reflect today's requirements for the educational level of young people. [7,8].

Under the competence of professional self-determination, we understand the ability to design our further professional development on the basis of awareness of our interests and abilities, motivation to choose a future profession, the ability to be responsible for the results of independent choice of a future profession, to determine their educational goals and objectives.

The competence of professional self-determination is the first "step" to the professional competence of the future specialist, and therefore, its important components should not only relate to the professional knowledge and ability of a certain content and level, but also certain qualities of the person, characterizing the willingness to choose the direction of future professional activity.

An essential feature of professional self-determination competence is the ability to solve multiple tasks related to the definition of a future profession, the choice of professional-technical schools, based on the use of criteria that meet the characteristics of professional activity and

vocational education.

This level of education is manifested in the ability to select the sources of educational information required to prepare for study at professional-technical schools, in the orientation of typical life difficulties associated with a certain professional activity, understanding of professional values, readiness to study at a certain profile, ability to evaluate their professional abilities. [9,10,11].

Therefore, a competent approach objectively extends our capacity to know and identify ways of educational development in a rapidly changing external world, to the demands placed on graduates of secondary schools by society. This approach allows us to more adequately reflect the new requirements for the content and results of training, training of future workforce, and to evaluate their quality more rigorously.

Although a competent approach may not be the only one in an educational organization that promotes the professional self-determination of upper grades, it reflects the objective need to increase attention to the personally meaningful and demanding learning outcomes. The achieved level of professional self-determination competence is seen as fundamental to effective professional self-determination and the design of further professional growth.

The level of development of a country in a modern society is determined not only by the state of its technical potential, but also by the professional competence of specialists trained in vocational education.

Today's labor market, with its increased demands on the quality of education, competence and professional readiness of future professionals, in its turn, leads to increased competition between graduates of professional-technical schools.

Mechanisms of professional competence formation in adolescents.

If the pre-qualification of a specialist envisaged only the relevance of the workplace and the possession of narrow information required in a particular activity, and the training of students was reduced to standard knowledge, skills, then "competence" differs primarily in that it involves mastering the knowledge not only of the general, but also in a wide area, the ability and

willingness to successfully implement their skills, while improving the quality and efficiency of their activities.

Professional competence of professional-technical schools students is a formed association of personality traits that will further assist them in the successful realization of their knowledge, skills and work skills.

In its turn, the competence approach requires significant changes in educational technologies. That is why professional-technical schools today face a task to develop special technologies and ways of implementing them in the learning process.

It is not possible to form the professional competence of professional-technical schools students without contextual education and interdisciplinary communication. As with contextual education, the modeling of professional and social components of the future working profession is taking place, and interdisciplinary integration, in its turn, acts as a unifying link of knowledge of different branches of science.

In addition, today there is a need for research activities aimed at updating the total amount of theoretical knowledge, scientific achievements that can become the basis of innovative production technologies. A modern graduate - a future professional worker - should be able to apply the knowledge of different disciplines in his professional activity.

For professional-technical schools students, interdisciplinary integration is the highest form of unity of goals, principles and content of education, creating a large-scale interconnection of all educational disciplines in the educational program. Therefore, it is necessary to begin development of professional competence from the first stage of studying, in order for the graduates to have the ability to independently perform certain actions aimed at finding optimal solutions in any difficult professional situations. In professional-technical schools, this can be done through cross-disciplinary communication. For example, by combining the disciplines "Overhaul of wells" and "Economics", students can not only consider the measures associated with the restoration of wells, but also independently calculate their economic efficiency. Combining "Resistance of Materials", "Physics" and "Chemistry", students can be offered tasks related to the search for the composition and properties of materials, etc. That is, the ability to apply knowledge from different disciplines together, the ability to transfer ideas and methods from

one science to another will be the key to successfully preparing students for future professional activities. [12].

Thus, professional activity through interdisciplinary integration will be justified if the training of the students of professional-technical schools is implemented with regular use of integrated tasks performed in practical classes, since only practical classes allow to consolidate the knowledge gained in the learning of theory. By doing one or another practical work, the student acquires the practical skills necessary for successful professional activity. The graduate, who has mastered professional skills, has the opportunity to compete successfully in the labor market, and deep knowledge that allows creative use of professional skills will help to achieve higher quantitative and qualitative indicators.

Through the prism of professional competence lays the foundation for all graduates to solve complex problems that arise in reality. The universal, creative, developed personality of the future professional can be formed only under the condition of an inseparable pedagogical process, each stage of which is built on common principles and methods and aims at the ultimate goal - professional competence of the worker. This is why interdisciplinary integration is a significant prerequisite for the education of professional-technical schools students.

By itself, the process of forming professional competences is an important and complex problem, which can only be solved by combining the efforts of school and vocational education.

Based on the qualification approach, the vocational education program is linked to the objects of work and correlated with their features. At the same time, this approach does not allow to testify which opportunities, readiness, knowledge and relations are optimally connected with effective human life activity in many contexts, therefore the requirements formulated in the qualification characteristic for the graduates of professional-technical schools, developed on the basis of system-activity approach, not fully satisfied the socio-economic and technological conditions of production.

In addition to knowledge, skills and abilities, modern professionals must possess socially and professionally significant qualities that are professional. These characteristics are characterized by a large range of structure in the structure of the specialist, providing professional mobility, productivity and competitiveness.

Competencies, unlike generalized, universal knowledge, are effective, practically oriented. Therefore, in addition to the system of theoretical and applied knowledge, they also include the cognitive and operational-technological component. That means the competence is a collection of knowledge in action.

Acquisition, transformation and use of knowledge involve active cognitive activity, so the structure of competence also includes emotional-volitional and motivational components. The competence approach is the goal-oriented priority to the following vectors of education: the ability to learn, self-determination, self-actualization, socialization and the development of individuality.

Unlike the qualification approach in vocational education, the competency approach is less rigidly tied to a specific object and subject of work, which allows ensure mobility of graduates of vocational education and training in a changing labor market.

In foreign science and practice, such integrative categories have been adopted - "key qualification" (Germany), "basic skills" (in EU countries), "key skills" (UK). The introduction of new educational constructs - competences and key qualifications - in addition to knowledge and skills- is scientifically substantiated by scientists of the EU countries.

On the basis of the analysis of interrelation and interdependence of socio-economic and technical and economic processes of production and nature of vocational education in modern society the theoretical substantiation of the concept of "key qualification" is made. The basic idea is to train a new generation of workers who are able to adapt to dynamically changing production process, easily transitioning from one type of work to another, possessing the skills required for a wide range of professions.

In the UK, "key skills" are seen as a way to improve the learner's broad competencies:

- Competence in performing a number of different work operations, most of which may be foreseeable.

- Competence in a large number of different operations performed in different contexts. Some of the operations are complex, involve some individual responsibility, cooperation with other people.

- Competence in a large number of different work operations. There is a significant degree of

responsibility and autonomy, often requiring leadership and control over other people.

- Competence in a large number of complex technical or professional work operations carried out in a large number of different contexts with a pronounced personal responsibility and independence [13].

Analyzing the reasons and factors that lead to a reorientation from a vocational training qualification approach to a comprehensive one, the following causes are distinguished:

- fundamental changes in almost all professions;
- emergence of new professions, "demarcation" of former ones;
- increasing the role of horizontal mobility during working life;
- vocational education (blurring the boundaries between classical and new professions);
- globalization of professions and professionals;
- decentralization of economic responsibility;
- decentralization for quality work;
- strengthening the horizontal hierarchy of organizations;
- development of an adequate vocational education system (flexibility, transparency, comparability, expansion of "lifelong learning")
- strengthening of role and complication of tasks of "personal development";
- changes in lifestyles at different levels: global, society, organizational, individual;
- introduction of market mechanisms into vocational education;
- strengthening the factor of dynamism and uncertainty;
- reduction of social protection of citizens.
- underdeveloped forms and mechanisms of employers' participation in educational policy;
- lack of flexibility, inertia and weak response of the education system to external factors.

Therefore, the urgent need to change the global paradigm, the approach to considering the

results and evaluation of the vocational education quality is not due to a fashion or reckless rejection of old traditions, but due to objective socio-economic realities. Competent approach in vocational education allows put at the forefront interdisciplinary and integrated requirements to the result of the educational process, to relate more closely the goals of training to the situations used in the world of work, to give the personality of the future specialist greater opportunities for realizing their potential.

References

1. Andreeva L.I. (2012). *Professionalnoe samoopredelenie shkolnikov v usloviyah innovatsionnoy deyatel'nosti obshchobrazovatel'nogo uchrezhdeniya* [Professional self-determination of schoolboys in the conditions of innovative activity of educational institution]. Kharkiv, Ukraine: Health Publ. [in Russian]
2. Bech I.D. (2017). *Vibrani pitannya pro vihovannya osobistosti*. [Selected questions about education of personality]. Kyiv, Ukraine: LibId Publ. [in Ukrainian]
3. Dementev I.V. (2018). [The problem of professional self-determination of schoolboys in modern vocational guidance: the psychological and pedagogical aspects]. *Rus. Institute of Higher School*, 5 (12), 248–255.
4. Dus T.E. (2014). *Podgotovka starsheklassnikov k osoznannomu vyboru professii v protsesse sotsialnoy raboty s molodezhyu* [Preparing high school students to make a conscious choice of profession in the process of social work with young people]. Vinnitsa, Ukraine: New book Publ. [in Russian]
5. Grinshpun S.S. (2014). «Academy X»: preparing american students for life and work. *Russian Pedagogical Journal*, 4(12), 103 – 108.
6. Klyueva E.A. (2013). *Tehnologiya sotsialnoy raboty s molodyozhyu: materialy naukovopraktychnoi konferencii*. [Professional orientation as a basis for successful socialization of young people in the labor market. Proceedings of scientific conference: The technology of social work with young people]. Kostroma, Russia, 95–98. [in Russian]
7. Kuznetsov V.V. (2007). Foreign experience in the organization of interaction of the labor market and vocational training system. *Public education*, 1(1), 194 – 199.

8. Marius G. (2013). An ampirical investigation and validation of types of career orientation. *Journal of Clinic Medicune*, 2(15),1–5.
9. McLaren M. (2016). *The role of meaning and purpose in the career development of adolescents: a qualitative study*. Colorado: Plenum Publishers.
10. Reana A.A. (2015). *Psihologiya podrostka* [The adolescent psychology]. St. Petersburg, Russia: Evroznak Publ. [in Russian]
11. Sheh S.A. (2013). Career guidance for yong people: The impact of the new duty on schools (literature reviewer). *Sixth Special Report of Session*, 18 (9),1-16. Retrieved from: doi:10.6084/m7.figshare.77531456
12. Yakuba Y.A. (2013). Professional competence - the basis of competitive graduates. *Education Policy*,19 (5), 41–44. Retrieved from: doi:10.6084/m9.figshare.775315
13. Zhizhin K.S. (2014). Information technology in the context of accelerating the training specialist. *Applied Informatics*, 6 (12),19–21. Retrieved from: doi:10.15561/18189172.2016.0502

**PSYCHOLOGICAL CHARACTERISTICS OF ANXIETY AND DEPRESSIVE
DISORDERS OF ART-DIAGNOSTICS IN CHILDREN WHEN CHOOSING
THERAPEUTIC TACTICS OF INTERVENTION**

Iemiliia Mykhailova

Doctor of Medicine,

Leading Science Researcher, Psychiatry Department,

State Institution «Institute for Children and

Adolescents Health Care of the National Academy

of Medical Sciences of Ukraine», Kharkiv, Ukraine

Abstract.

The article represents a new method of art-therapeutic psycho-diagnostics of anxiety-depressive disorder in children. Formal graphic elements with diagnostic significance in anxiety and depression differentiation in children in the age aspect are highlighted. Features of the course of anxiety-depressive disorder in children in the age aspect are represented: children have comorbidity of anxiety with cognitive disorders (neurocognitive disorders) and phobias, adolescents have anxiety with emotional disorders (depression) and behavioral disturbances (escape behavior). It is found that children of 7-11 years have prevailing constitutional neuropathic option and the teenagers have thymopathy variant of anxiety disorder. Informative signs of phobic formations providing reliable psychopathological differentiation of anxiety disorders are identified: the dominant type, defining the clinical evidence; accessory type, involved in syndrome-complex pathoplastics, and isolated type. Psychological predictors of the anxiety disorder development in children are identified: infantilism, personal anxiety, poly-accentuation of personality traits. It was found that the formation of anxiety and depressive disorders in children, regardless of age, is influenced by the pathological type of family relations (disjointed, divided and rigid). In the projective family picture, most children with anxiety disorders were diagnosed with a violation of emotional family ties. Predictive factors of anxiety-

depressive disorder in children were established: genetic predisposition and external conditions for the development of this state (residual - organic conditions; in family - distortion of family interaction with the formation of child and anxious parent symbiotic relations, and environmental). Analysis of information obtained in projective drawing tests allowed differentiating and systematizing graphic signs of anxiety, phobias and depression. It is shown that art diagnostics method expands the possibilities of early detection of child social and cognitive functioning distortion with anxiety and depressive disorders.

Keywords: children, teenagers, anxiety, depression, projective drawing tests.

1. Introduction

The study of psychological aspects of anxiety and depressive disorders in children and adolescents problem becomes important in the context of increasing prevalence of this pathology and the scale of its impact on psychological well-being and social adaptation in adolescence [1, 2]. Clinical and social prognosis, choice of therapy and social rehabilitation methods of children with anxiety and depressive disorders depend on integrative assessment of a number of factors [3,4]. Anxiety-depressive disorders in children and adolescents are almost rarely diagnosed, as these conditions have different masks, which complicate early diagnosis and therapy.

Psychopathological features of neurotic anxiety in children in the age aspect, relationship of anxiety with stress and depression, clinical dynamics of the neurotic process, affinity for other neurotic symptoms have not been sufficiently studied [5,6]. In the context of rehabilitation, it is especially important to define the "internal picture of the disease", psychological problems imprinting of a child with anxiety-phobic and anxiety-depressive disorders [7, 8].

It is known that the basis of disease response is the distortion of body ego and spiritual self, and change in self-consciousness [9, 10]. In view of the above, the aim of this work was to study the psychological patterns of anxiety and depressive disorder in children in the age aspect.

2. Materials and Methods. A comprehensive clinical psychopathological, psycho-diagnostic study was performed within 108 children with anxiety disorders (52 children of 7-11 years and 56 adolescents of 12-16 years), who were treated in the Department of Psychiatry of the State Institution "Institute of the Health Care of Children and Adolescents of the National Academy of

Medical Sciences of Ukraine” in the period 2016-2018.

Among psychological methods – Questionnaire CDRS-R to Depression Assess, State-Trait Anxiety Inventory to determine personal and situational anxiety, Children Anxiety Evaluation Method (CAEM), Interference Color Test - ICT. Package of projective drawing techniques – "I am in the Past", "I am in the Present", "I am in the Future", "I am in this World", family drawing, "Man in the Rain", "Imaginary Animal". In determining the typology of psychosocial stressors the author technique [11] was used, including the definition of psychogenic spectrum with stressor differentiation depending on its duration and intensity; clarification of psychosocial stressor orientation vector.

3. Results. Analysis of clinical symptoms of children with anxiety and depressive disorders in the age aspect showed that most patients were characterized by somatic, emotional, behavioral symptoms. Attention was drawn to the facts of constant anxiety, emotional tension, fatigue, headache tension of different localization and intensity, recorded in all children, regardless of age and sex. At the same time, the constant anxiety and tension did not correspond to the real reasons. Among other subjective complaints, children with anxiety and depressive disorders were concentrated on anxiety, decreased appetite, whining, poor school performance, fears and somatic complaints. Patients and their parents did not expressed indications of anxiety, depression or other symptoms of anxiety and depressive disorders.

We've developed a map that included a list of complaints of anxiety and depression spectrum used in the interviewing of patients and their parents. The list covered fairly wide range complaints requiring follow-up categorical psychopathological differentiation of symptomatic, syndromic and nosological level.

Studies have found that clinical variants of anxiety-depressive disorders in children have age-related features. So, children of 7-11 years have prevailing constitutional neuropathic option (82.7%) and the teenagers have thymopathy (73.2%) variant of anxiety disorder. Children of 7-11 years significantly more often ($p<0.05$) have the prevailed level of general anxiety, corresponding to moderate severity, and a high level of situational anxiety ($p<0.01$), while adolescents have a high level of personal anxiety ($p<0.001$) and a decrease in level of mental activity associated with anxiety ($p<0.001$). Aggressive behavior was recorded in more than half of the cases, both in children and adolescents (58.6% and 64.9%, respectively, $p<0.05$) with their prevalence in

adolescents. Aggression, in fact, indicates the expressed tension and growing anxiety. In adolescents, symptoms of muscle tension (dorsalgia, myalgia) were more common (66.2% and 6.9%, respectively, $p < 0.005$). More than half of adolescents with anxiety-depressive disorders were found to have symptoms of affective register: low mood, low self-esteem, loss of interest, which is also much more common than in children of 7 -11 years. More than a third of adolescents with anxiety-depressive disorders have obsessive thoughts, which is significantly more often than children (36.5% and 13.7 %, respectively, $p < 0.001$), indicating the anxiety comorbidity with obsessive disorders.

Cognitive disorders in the form of memory disorders in the clinical picture of anxiety-depressive disorder had a fairly high proportion in both children and adolescents (77.0% and 86.2 %, respectively, $p < 0.05$).

Informative signs of phobic formations providing reliable psychopathological differentiation of anxiety-depressive disorders are identified: the dominant type, defining the clinical evidence (12.4); accessory (combined type), involved in syndrome-complex pathoplastics (68.6%), and isolated (mono-symptomatic) type (19.0%). Studies have established the age-specific phobias in children with anxiety and depressive disorders: children – natural and social fears; adolescents – social and vital. Psychological predictors of the anxiety-depressive disorders development in children are identified: infantilism, personal anxiety, poly-accentuation of personality traits. Predictive factors of anxiety-depressive disorder in children were established: genetic predisposition and external conditions for the development (residual - organic conditions; in family - distortion of family interaction with the formation of child and anxious parent symbiotic relations, and environmental). An important element of anxiety and depressive disorder formation in children is to clarify the age stage of the psycho-traumatic factor impact. The relevance of the psycho-traumatic situation has age specificity, which, in fact, determines the vector of medical and psychological intervention. Psychopathology symptomatology of anxiety and depressive disorders in children is heterogenic and has age differences. Clinical and dynamic studies have shown that anxiety disorders in children are comorbid with cognitive disorders (attention and memory disorders) (74.6%) and phobias (100%), while in adolescents – with emotional (depression) (80.2%) and behavioral disorders (escape behavior) (58.2%).

Anxiety disorder in children significantly more often includes manifestations of somatic and

cognitive clusters, while for adolescents - emotional and behavioral clusters.

Analysis of anxiety structure studying results in children and adolescents with anxiety and depressive disorders on CAEM Scale allows establishing the high and very high levels of anxiety for any of CAEM Scales - 73.4% of patients, including boys (53.8%) and girls (80.9%) ($\varphi=2.65$; $RF<0.01$).

Projective psycho-diagnostics data based on the determination of color preferences in the Lusher Test allowed characterizing the stress unconscious components in children and adolescents with anxiety and depressive disorders. The average stress in the examined group of patients with anxiety disorder was 3.15 ± 0.29 points; 2.65 ± 0.42 points in the subgroup of boys; 3.37 ± 0.37 points in the subgroup of girls.

In the age aspect (Fig.1) the stress index according to the Lusher Test was a 4.0 ± 0.89 point in the group of children of 7-11 years, in patients of 12-14 years this indicator was slightly lower on average and amounted to 2.8 ± 0.67 points; in the group of 15-17 years - 2.9 ± 0.41 points.

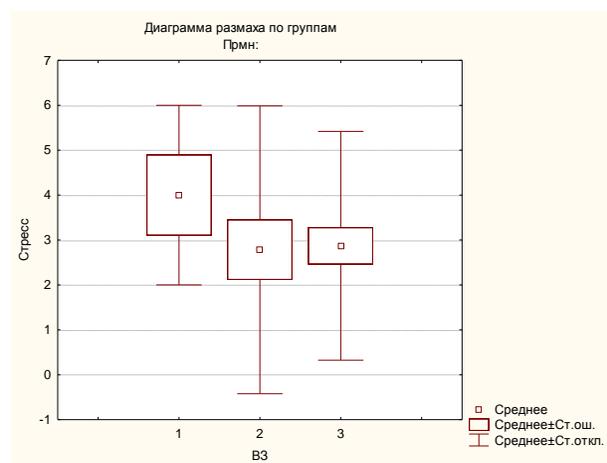


Fig.1 - Parameters of Stress Indicators According to Lusher Test in Three Age Subgroups of Patients with Anxiety Disorders.

Situational Anxiety (SA) determined by self-assessment scale has displayed the actual current level of anxiety tension of the child. In the examined group of patients with anxiety disorder, the average level of SA was 44.3 ± 1.28 points, which corresponded to indicator average values.

In the subgroup of boys the average values of SA were $38,60\pm1.70$ points – the average level of symptom severity, and in the subgroup of girls, this figure was 8 points higher – $46,52\pm1.57$ points, high level ($t=-2,87$; $Pt<0,01$).

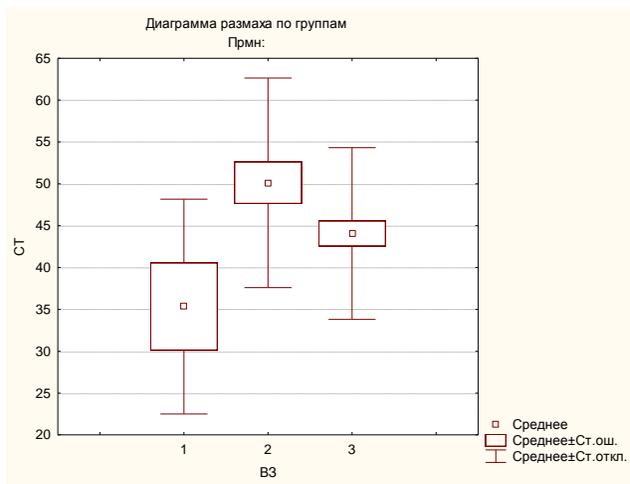


Fig.2 - Parameters of Situational Anxiety Level Indicators in Three Age Subgroups of Children with Anxiety and Depressive Disorders.

Indicator of situational anxiety (Fig.2) in the group of children of 7-11 years had the lowest values ($35,3 \pm 5.24$ points), whereas in patients of younger teenagers (12-14 years) this figure was highest, on average reaching 50.1 ± 2.5 points. High rates of situational anxiety were found in older adolescents (15-17 years). Thus, the indicator of situational anxiety averaged 44.1 ± 1.51 points. Indicators of situational anxiety were significantly differed in all three groups of examined patients ($P < 0.03$).

Low rates of anxiety according to self-assessment scales, combined with higher rates of anxiety and stress according to projective testing, indicate a decrease in the level of self-understanding of emotional state, difficulty in anxiety recognizing and depression in patients of the younger age group.

As it is known, the body ego is the most important starting point of any activity of the child. As the child grows older, he/she begins to associate different sensations, perceptions and emotions with certain parts of the body. It is known that drawing a human figure, including the projection of the "body diagram", is a natural means of expressing the bodily needs and conflicts of the person performing the drawing. Accordingly, the image of the human figure is a convenient tool for the study of psychological and emotional problems. An attempt is made to use projective tests as a diagnostic tool for markers of anxiety, the features of internally interconnected drawing patterns, to the extent that they reflect the dynamics of anxiety or depressive symptom complex. Informative diagnostic markers of anxiety and depression in children in the age aspect are

allocated. Clinical symptoms of fear and anxiety in the drawings of the "Imaginary Animal" in children and adolescents with anxiety and depressive disorders were reflected by the darkening of contour lines (spikes, barriers, protection from above). Aggression - both direct and indirect, was reflected in children in the form of claws, teeth, fangs, tousled hair and feathers, horns, sharp beak, demonic images, indicating a high degree of uncontrolled aggression and auto-aggression, victimization. It was found that 53.7 % of children with anxiety disorders in the projective test "I am in the Past" traced a thin neck, small shoulders, which reflected a feeling of physical weakness and a decrease in self-confidence. In the projective drawing test "I am in the Present" in 23.4% of cases, the sign of "large body" was registered, indicating the presence of an unmet need. The symptom "unusually small body" has been showed by 22.9% of patients, which indicates their dissatisfaction with their real physical condition. Internal tension, phobia were evidenced by hands depicted too close to body (62.0 %). In the projective drawings of children with anxiety disorders the splayed and primitive fingers (28.7%) were often drawn, reflecting regressive traits and difficulties in social adaptation. In the projective test "I am in the Future" 26.8 % of children have depicted only the head. It is known that the head as the center of ego localization is always involved in the process of social relationships. It can be assumed that these patients experienced difficulties in concentration and focus, as well as in increasing their own importance.

It was found that the formation of anxiety and depressive disorders in children, regardless of age, is influenced by the pathological type of family relations (disjointed, divided and rigid). In the projective family picture 82.4% of children with anxiety disorders were diagnosed with a violation of emotional family connections. It is known that in the study of the life path of the individual the dynamic aspect is distinguished by the category of past, present and future. These categories are most adequate to the peculiarities of the life path as a specific process; they are relative to the person constantly moving in time. Psychological perspective is the cognitive ability to foresee the future, to predict it, presenting yourself in it, and this holistic readiness for it in the present. Such a prospect can take place even in individuals with poor cognitive, undifferentiated, unconscious vision of the future. Personal perspective is opened in the presence of abilities as future opportunities, maturity, and therefore readiness for difficulties, surprises. Emotional, volitional and intellectual components are merged with anxiety in the child's experience, which reflect the events and circumstances of life in their relation to the subject itself. The experience is stored in the memory of the person. The analysis of projective drawings has showed that the vector and

direction of the psycho-traumatic factor of 45.4 % of children were represented mainly "in the present", and 54.6 % – in the "future". Analysis of information obtained in the projective drawing tests allowed to differentiate and organize graphic signs of anxiety (dense cross-hatching, change the pressure, profile image of the figure, image from the back, plenty of wipes, beginning of human figure drawing from the feet); phobias (empty or blackened eye sockets, intense shading of the hair) and depression (small size of the figure, placing the figure at the bottom of the sheet, weak pressure, slumped shoulders, man soaking wet in the rain).

4. Discussion. The set of projective drawing tests and systematic of anxiety and depression diagnostic items are informative for clinical diagnosis and register differentiation of neurotic register anxiety-depressive disorders psychopathology in children. Patients of 7-11 years have found misalignment of self-esteem and projective indicators of anxiety, which indicates the difficulties of self-understanding in children. The identified features are important for determining the tactics of anxiety disorders treatment in children and adolescents.

The main hypothesis of the diagnostic application of projective drawing tests in the child population is that the combination of various formal features of drawing correlates with diagnostic categories associated with anxiety, depressive and phobic disorders. In fact, the method of art diagnostics expands the possibilities of early detection of social and cognitive functioning disorders in children with anxiety disorders, which can provide primary and secondary psychoprophylaxis and determination of medical and psychological intervention vector in the early stages of neurotic disease in children.

References

1. Maruta N. O. (2014). Modern Problems of Comorbid Disorders in Psychiatry: the View of Specialists. *Ukrainian Medical Journal*, 1-4. Retrieved from: www.umj.com.ua.
2. Bobrov A. E., Krasnov V. N., Dovzhenko T. V. Tsarenko D. M. (2012). Interrelationships between Depression, Anxiety and Cognitive Deficit in Primary Care Patients. *Nordic Congress of Psychiatry Abstract Book*, 23.
3. Muris P. (2006). The Pathogenesis of Childhood Anxiety Disorders: Considerations from a Developmental Psychopathology Perspective. *International Journal of Behavioral Development*,

30 (1), 5-11. Retrieved from: doi: 10.1177/0165025406059967.

4. Mykhailova I., Proskurina T., Bagatska N., Mitelov D., Matkovska T., Reshetovska N. (2015). Depression in Adolescents (Clinical and Age, Neurocognitive, Genetic Aspects). *Ukrainian Department Bulletin*, 23 (2 (83)), 75-78.

5. Kopeiko G. (2011). Mixed Affective States in the Juvenile Age (Historical Aspects, Current State of the Problem, Psychopathology). *Journal of Neurology and Psychiatry named after S. S. Korsakov*, 111 (10), 4-11.

6. Mykhailova I. (2014). *Cognitive and Neurophysiological Markers of Depression in Children. Focusing on Access, Quality and Humane Care*. Madrid, Spain, 1074.

7. Mykhailova I., Proskurina T., Matkovska T., Mitelov D. (2013). *Clinical, Psychological, Social and Biological Risk Factors of Depression in Children*. *World Psychiatric Association International Congress*. Vienna, Austria, 224.

8. Dubicka B., Elvins R., Roberts C., Chick G., Wilkinson P., Goodyer I. M. (2010). Combined Treatment with Cognitive-Behavioural Therapy in Adolescent Depression: Meta-Analysis. *The British Journal of Psychiatry*, 197 (6), 433-440. Retrieved from: doi: 10.1192/bjp.bp.109.075853.

9. Bellantuono C., Nardi B., Francesconi G., Catena-Dell'Osso M. (2013). Adolescent Depression: Clinical Features and Therapeutic Strategies. *European Review for Medical and Pharmacological Sciences*, 17, 1546–1551.

FEATURES OF THE CHROMOSOMAL APPARATUS IN ADOLESCENTS WITH DEPRESSIVE BEHAVIORAL DISORDERS

Natalie Bogatska

Doctor of Biological, Professor,

State Institution «Institute for Children and

Adolescents Health Care of the National Academy

of Medical Sciences of Ukraine», Kharkiv, Ukraine

Abstract.

According to World Health Organization data, currently more than 450 million people have various mental disorders, and about 15% of the world's population need psychiatric care. Among all mental disorders, the contribution of depressive disorders is 11-15%, being the leading chronic disease in Europe. Ukraine is the leader among European countries for the frequency of depression – 9.1% of the population, and adolescent depression – 5-6%. Few studies on depression in children and adolescents have identified the following factors: genetic and perinatal and postnatal, family accumulation of mental disorders, stress of a child at home and in the educational institution. Cytogenetic analysis was carried out in 35 patients of both sexes with depressive behavior disorders (main group) and 50 healthy peers (control group) 12-17 years old, examined in the SI "ICAHC NAMS". It was found that 100% of patients with depression and 64% of healthy adolescents had various structural disorders of chromosomes. The spontaneous frequency of aberrations in LPB of patients was 3.9 times higher than the frequency of aberrations in healthy peers. The frequency of chromosome (paired acentric fragments, dicentric chromosomes, intrachromosomal exchanges) and chromatid-type aberrations (single acentric fragments) also prevailed in the LPB of sick adolescents.

Key words: depressive behavioral disorders, adolescents, chromosomes, aberrations.

Introduction. It is known that the concept of mental health is an integral part of public health and has a significant impact on the state of countries and their human, social and economic potential. According to World Health Organization data, currently more than 450 million people have various mental disorders, and about 15% of the world's population need psychiatric care [9]. Among all mental disorders, the contribution of depressive disorders is 11-15%, being the leading chronic disease in Europe [10]. Ukraine is the leader among European countries for the frequency of depression – 9.1% of the population, and adolescent depression – 5-6% [6, 7]. It should be noted that the situation around the world and in Ukraine also, has been deteriorating in recent years, due to the negative impact of many factors on the formation of mental disorders. Of particular concern is the increase in the incidence of depressive disorders among adolescents, and the average age of children who show symptoms is decreasing. Adolescent depressive disorders have a powerful destructive potential, so they are a threat to human life, starting from adolescence [5, 8]. In a few studies on depression in children and adolescents, the following factors have been identified: genetic factors [2, 4] and perinatal and postnatal, familial accumulation of mental disorders, stress of a child at home and at the school [1].

Materials and methods. Cytogenetic analysis was carried out in 35 patients of both sexes with depressive behavior disorders (main group) and 50 healthy peers (control group) 12-17 years old, examined in the SI "IHAC NAMN". The diagnosis was established in the Department of Psychiatry of the Institute on the basis of a comprehensive clinical and psychopathological examination of patients. In accordance with the principles of the Helsinki Declaration of Human Rights, the Council of Europe Convention on Human Rights and Biomedicine and the relevant Laws of Ukraine, parents of the probands surveyed, as well as children over the age of 14, gave informed consent to conduct cytogenetic research.

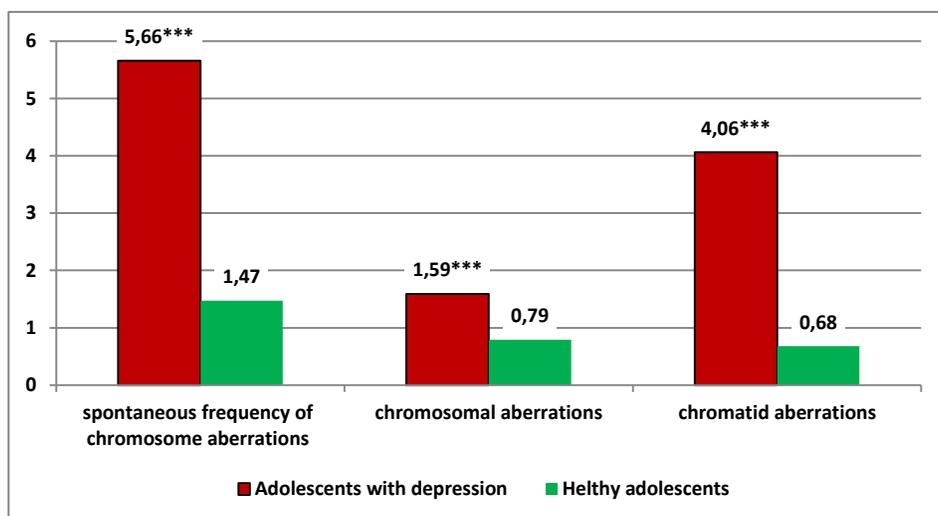
Cultivation of peripheral blood lymphocytes (PBL) was carried out according to the standard scheme. PB-Max (USA) was used to cultivate PBL. The stop of mitosis during the metaphase stage was carried out by the introduction of colchicine (Gipco, Austria) into the mixture in the final concentration of 0.1 microgram/ml. The next step was the processing of the cultural mixture with a hypotonic solution of potassium chloride (0.075 M). The cells were fixed with a mixture of ethanol and glacial acetic acid (ratio 3:1) for 40 minutes, followed by three-fold centrifugation.

Preparations were made by dripping up the cell suspension on wet cold slides. Chromosome

preparations staining was carried out with Giemsa (homogeneous and GTG-). We analyzed 100 to 200 metaphase plates (a total of 4207 metaphase plates in patients with depressive behavioral disorders and 5300 in healthy peers).

Metaphase plates were studied using the Leica CME binocular microscope (Austria), 10x18 eyepiece, 100x objective, 1.25x binocular head. Statistical calculations were made using Excel application package, SPSS Statistics 17.0. The Student criterion was used to determine the significance of the differences between indices.

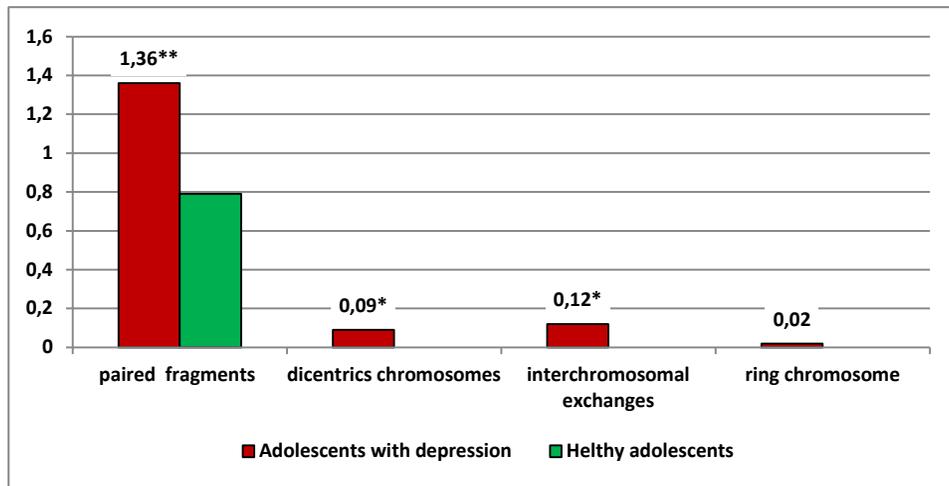
Results and discussions. According to the results of the cytogenetic analysis conducted in adolescents with depressive behavioral disorders, the frequency and types of chromosomal disorders in the PBL were studied. It was found that 100% of patients with depression and 64% of healthy adolescents had various structural disorders of chromosomes. The spontaneous frequency of chromosome aberrations in PBL of patients was 3.9 times higher than the frequency of aberrations in healthy peers (Figure 1).



Note: differences are statistically significant, $p < 0.001$.

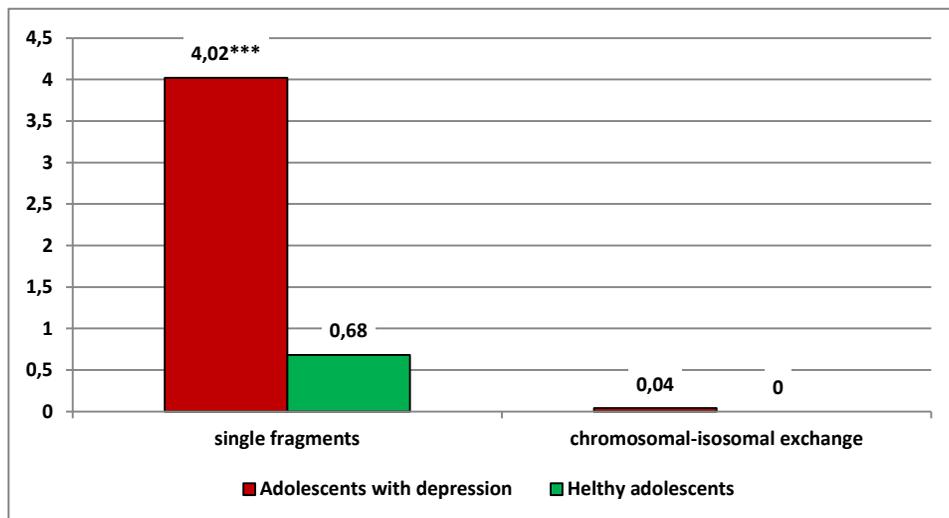
Fig. 1. Comparison of chromosome aberrations frequency in PBL of patients and healthy adolescents, %

Frequency of chromosomal aberrations (paired acentric fragments, dicentric chromosomes, interchromosomal exchanges) (Figure 2) and chromatid (single acentric fragments) (Figure 3) types also prevailed in PBL of sick adolescents.



Note: differences are statistically significant – $p < 0.01$; $p < 0.05$.

Fig. 2. Comparison of chromosomal aberration frequency in PBL of sick and healthy adolescents, %



Note: differences are statistically significant, $p < 0.001$.

Fig. 3. Comparison of frequency of chromatid aberrations in PBL of sick and healthy adolescents, %

At present, explanation of the reasons of the formation of various disorders of chromosomal apparatus (paired fragments, ring chromosomes, interchromosomal exchanges), which we have identified in our patients with depression, is not in doubt – they may occur when damage of chromosomes occurs at the presynthetic stage (G_1 -phase) and a chromosome reacts as a single-strand structure. Formation of chromatid breaks and exchanges may occur when a chromosome is damaged at the stage of two strands (phases S and G_2). Such breaks differ from interchange

configurations in their physical appearance in the metaphase and are real damage for the integrity of the chromosome with a clear shift of fragments, including also fragments, chromosomal origin of which is sometimes impossible to define. It has been suggested that in the pathogenesis of endogenous mental diseases, disturbances of genome function play the role, leading to global dysregulation of the expression of neuronal genes. So, one of the most important reasons for the genome destabilization at mental disorders is changes in a system of genome stability maintaining – the group of RNA-editing proteins AID/APOBEC [3].

Conclusions. Based on cytogenetic analysis conducted in patients with depressive behavioral disorders, increased spontaneous level and types of chromosomal aberrations were revealed in the lymphocytes of the blood of probands, which was 3.9 times higher than the frequency of chromosomal aberrations in the PBL of healthy peers.

References

1. Bagatska N.V. (2019). Henetychni osoblyvosti depresyvnnykh rozladiv povedinky u pidlitkiv. [Genetic peculiarities of depressive behavior disorders in adolescents]. *Health Care for Children and Adolescents*, 1, 15–17 [in Ukraine]
2. Khalilova S.L. (2016). Vliyaniye nekotorykh genov na razvitiye psikhicheskikh rasstroystv. [The effect of some genes on the development of mental disorders.] *Scientific and Methodical Electronic Journal Concept*, 15, 1301-1305. Retrieved from: <http://e-koncept.ru/2016/96178.htm>. [in Russian]
3. Brazhkina E.A., Dominova I.N., Toshchakov S.V., et al. (2013). Genetika psikhicheskikh zabolevaniy: rol' retrotranspozitsii i RNK-redaktiruyushchikh belkov AID / APOBEC (obzor literatury). [Genetics of mental illness: the role of retrotransposition and RNA-editing proteins AID/APOBEC (literature review).] *Siberian Gazette of Psychiatry and Narcology*, 5 (80), 13-17 [in Russian]
4. Platonkina T.V. (2018). Geneticheskiye issledovaniya depressivnykh rasstroystv: obzor literatury. [Genetic research of depressive disorders: literature review.] *Bulletin Physiology and Pathology of Respiration*, 68, 96-106. Retrieved from: [10.12737/article_5b19ee7411be17.38016141](https://doi.org/10.12737/article_5b19ee7411be17.38016141) [in Russian]

5. Zelenska K. A., Koltsova G. G. (2017). Kliniko-psikhopatologicheskiy analiz sovremennykh depressivnykh rasstroystv v sochetanii s suitsidal'nym povedeniyem u zhenshchin. [Clinical and psychopathological analysis of modern depressive disorders, combined with suicidal behavior in women.] *Scientific Journal «ScienceRise: Medical Science», 12 (20)*, 39-42 [in Russian]

6. (2013). *Comprehensive Mental Health Action Plan 2013-2020*. Geneva: WHO. Retrieved from: http://apps.who.int/gb/ebwha/pdf_files/WHA66/A66_R8-ru.pdf?ua=1/

7. Chornikov A.V., Spirina I.D., Timofyev R.M. (2018). Rol' stressovoy reaktsii i «nezrelykh» psikhicheskikh zashchitnykh mekhanizmov v formirovanii nevroticheskikh, stressovykh i somatoformnykh rasstroystv. [The role of stress reaction and "immature" mental protective mechanisms in the formation of neurotic, stress-related and somatoform disorders.] *Ukrains'kyi visnyk psikhonevrolohii, Vol. 26, Issue 1 (94)*, 92-94 [in Russian]

8. Stepanova O.A. (2017). [Preventions of depressive states of teenage girls within the activity of school psychological service.] *Bulletin of National Pedagogical Dragomanov University, Series 11: Social work. Social pedagogy, Vol. 23*, 111-118. Retrieved from: http://nbuv.gov.ua/UJRN/Nchnpu_011_2017_23_21 [in Russian].

9. Dudnyk S.V., Shafranskyi V.V. (2016). Psikhicheskoye zdorov'ye naseleniya Ukrainy: sostoyaniye zdorov'ya, problemy i puti resheniya problem. [Mental health of the population of Ukraine: health status, problems and ways of solving problems.] *Health of the Nation, 3 (39)*, 12-18 [in Russian]

10. (2015). The global strategy for women's, children's, and adolescents' health briefing note (2016–2030). *Sustainable development «Goals»*. Retrieved from: <http://www.everywomaneverychild.org>

**SOME PECULIARITIES IN THE MENTAL HEALTH STATUS OF CHILDREN
WITH NONTOXIC DIFFUSE GOITER**

Matkovska T.

Associate Professor,

Department of Psychiatry, Narcology, Neurology and Medical Psychology,

Medical Faculty, Kharkiv National University V.N.Karazin, Kharkiv, Ukraine

Abstract.

Statistical credibility of mental disorders has been established in adolescents with nontoxic diffuse goiter in the form of organic asthenic disorders, neurotic disturbances, somatoform vegetative dysfunctions which occur significantly more often than the same in adolescents with normal volume of the thyroid gland. Frequency of disorders does not depend on the functional state of the thyroid gland.

Key words: mental disorders, adolescents, thyroid gland, nontoxic diffuse goiter.

Introduction

The topicality of studying mental health in children and adolescents with nontoxic diffuse goiter (NDG) depends on the prevalence of the disease, polymorphism and ambiguity of psychopathological manifestations in this endocrine pathology, some difficulties of identifying its disorders, especially at the early stages of the disease, and, at last, an insufficient knowledge of the pathology which is formed against minimal thyroid dysfunctions.

Numerous studies have been focused on studying a pronounced mental pathology. For instance, the intellectual insufficiency in endemic cretinism has been subjected to a comprehensive study, while borderline mental disorders remain underestimated. Iodine deficiency is a threat to the intellectual potential and mental health of the population, residing in the regions with an environmental iodine deficiency. Thus, mental retardation has been registered twice more often in the regions of iodine deficiency, and almost 15% of pupils have difficulties in learning. A significantly increased level of morbidity has also been observed in such regions, while

anthropometric characters have a tendency to a decrease (1).

The significance of thyroid pathology grows due to the fact that some of its forms proceed with clinical manifestations of the disorders in the cardiovascular system and in other organs and systems, as well as with reproductive function disorders. Undoubtedly important are those numerous manifestations of the thyroid pathology, which reflect the endocrine response of the organism to stress, occurring in both acute and chronic forms.

Clinical feature of the thyroid diseases is their significant impact on medico-social status of the patient, manifesting itself in emotional disorders, mental reactivity, behavioral changes at home and at work, disorders or a significant decrease in self-criticism, memory and intellect. The enumerated facts inevitably cause some changes, as a rule a significant deterioration in the quality of life not only in aged disabled patients, but also in young and middle age patients with high social and creative activity.

Our research has established that thyroid pathology has a negative impact on mental health of the individual at all stages of life, causing the occurrence of a variety of clinical syndromes, beginning from mild disturbances and ending with severe mental disorders (2).

Taking into account the fact that hypothyroidism develops gradually and has latent atypical symptoms at the initial stage of the disease, worsening of the general state can be regarded as a result of mental or physical fatigue, pregnancy and childbirth. In some cases, symptoms of hypothyroidism resemble the signs of many other diseases. Patients appeal for aid to such specialists as cardiologists, gynecologists, neuropathologists, otolaryngologists etc., whose treatment does not lead to recovery (3).

Some authors are of opinion that the most frequent psychopathological symptoms, both of subclinical and manifest hypothyroidism, are depressive disorders. The relationships of subclinical forms of hypothyroidism with such states as depression, dementia, affective disorders have been proved by the authors (4, 5).

The greatest amount of research is devoted to the problems of the clinic, diagnosis and treatment of mental disorders in the hypofunction of the thyroid, and scientific works, devoted to a special study of mental pathology in the subclinical form of hypothyroidism, in the psychiatry of the country, are practically absent in the psychiatry of the country.

The study aims at determining the impact of thyroid dysfunction on the mental health of adolescents with nontoxic diffuse goiter, aged 10-17.

Materials and methods: clinico-psychopathological method, which includes medical history, diagnostic interview and observations regarding motor, vegetative and emotional reactions; statistical method.

A total of 201 patients (91 boys and 110 girls) with NDG at the age of 10-17 years were under clinical observation.

Biological factors for prediction of mental disorders in children with NDG, aged 10 -17, were analyzed in our study.

Results and discussion

Analysis of the data obtained has shown that cerebroorganic factors of predisposition are presented in children in the form of: pathology of pregnancy (toxicosis, neuropathy, threatened abortion in early gestation), which is observed in 42.8% of their mothers. Pathology of childbirth occurs in 48.6% of mothers. Deviations of parturition are presented in the form of rapid delivery, breech presentation, early discharge of amniotic fluid; neuropathy of early childhood has been registered in half of our patients (53.6%).

Appreciation of the mental status has revealed the presence of psychopathological disorders in most of the examined persons (83.1%), Fig.1. The process of examination has established that in children, suffering from NDG, only 16.9% \pm 2.65% have no psychopathological disorders. Mental disorders have been recorded in 83.08% \pm 3.7% of the total number of patients from the study group without any significant difference between boys and girls (81.8% \pm 3.7% and 84.6% \pm 3.8%, respectively).

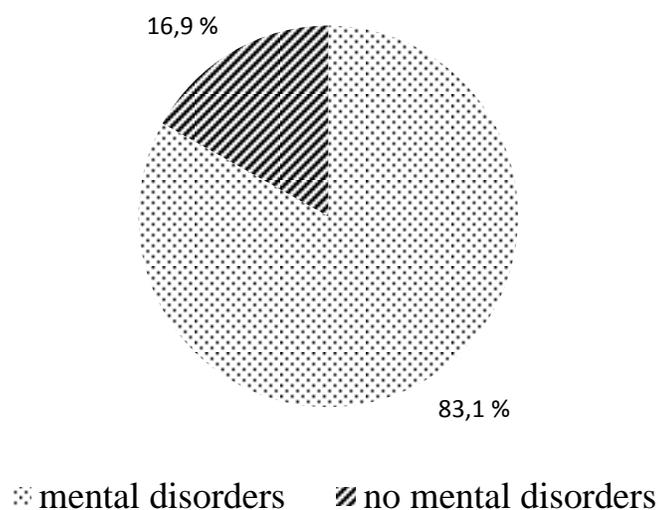


Fig.1. Frequency of mental disorders in adolescents with NDG and in the comparison group.

The diagnostic interview has shown the principal symptoms, involved in the formation of psychopathology in children with NDG. Various manifestations of asthenia were present in the overwhelming number of patients: post-exercise bodily weariness (83.1%), an increased mental fatigability (84.1%), irritability (84.6%), tension (84.6%), and the state of internal anxiety (84.6%). Emotional instability (85.6%), impaired mood (89.5%) and anxiety (89.5%) were observed in most of the patients studied. Such symptoms as apathy (2.5%), dysphoria, melancholy (2.5%), suicidal thoughts (2.59%) were registered in isolated cases (five patients).

Attention deficiency combined with hyperactivity was observed in two (0.99%) male patients only with predominance of hyperactive behavior. Sleep disturbances in the form of difficulties in falling asleep, disorders of the depth and duration of sleep were recorded in almost the same number of cases (29.8%, 30.3%, and 30.3%, respectively). Difficulties in falling asleep, split-period sleep, morning drowsiness and weakness were the leading complaints of our patients.

The children under examination complained of intermittent headache (63.7%), dizziness (49.2%), cardiac discomfort (34.8%), and dyspnoea (30.2%).

Poor memory, a decline in attention focusing and working capacity in the form of complaints have been revealed in the individual questioning of our patients (22.4%).

Affective disorders, such as depressive manifestations, have been found in 2.5% of the cases. The governing manifestations of the affective pathology were: a depressed mood, a pronounced reduction of interests, a decreased vitality, and an increased fatigability (asthenia). Additional symptoms, characterizing affective pathology, were presented in the form of a reduced ability to the attention focusing, a decreased self-appraisal, an unconscious guilt, suicidal tendencies, and sleep disorders.

Behavioral disorders in the form of attention deficiency in combination with hyperactivity have been recorded in 0.99% of the examined patients.

Development of three groups of disorders at the nosologic level has been established in patients with NDG, namely: asthenic organic, neurotic and affective, and stress-related disturbances.

Considering the gender aspect of psychopathology in children with NDG it should be noted that most symptoms occur equally, irrespective of sex.

It has been found that clinical polymorphous symptoms, with predominance in the clinical structure of the most frequent and intensive ones, are characteristic of children with NDG at the

age of 10 - 17 years. The established symptoms are: anxiety, emotional lability, tension, irritability, an increased mental and physical fatigue, recurrent headaches, and dizziness. The above symptoms in different combinations with some other symptoms conceal partly the endocrine pathology, complicating timely diagnosis of NDG at the present ontogenetic stage of development.

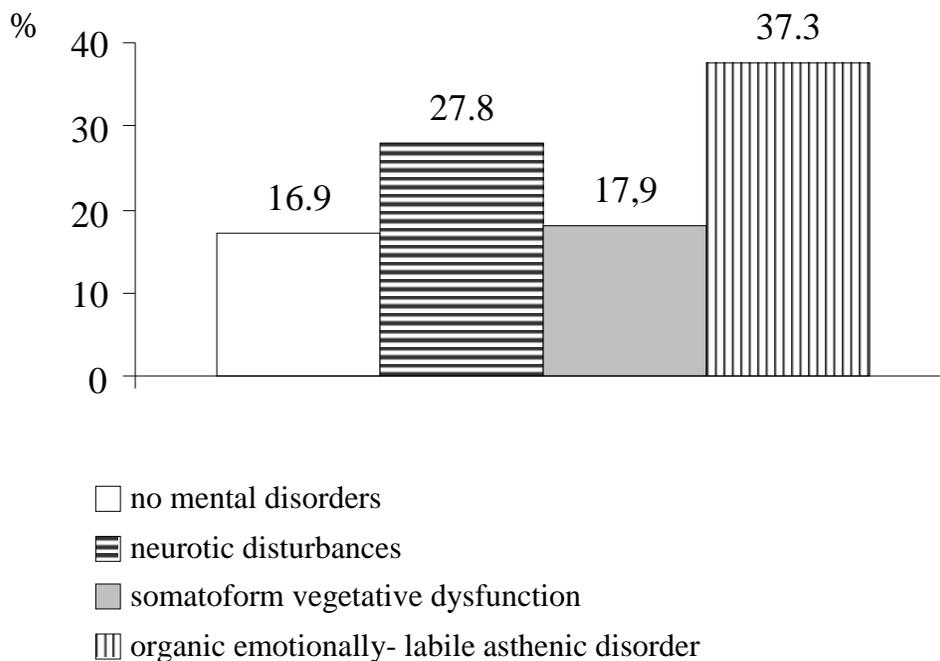


Fig.2. Frequency of mental disorders in children with NDG

Prevalence of organic emotionally-labile (asthenic) disturbances (37.3%) has been revealed in the analysis of mental disorders frequency in children with NDG. Disorders of the neurotic register have been found in $27.8\% \pm 3.2\%$ of our patients, and the events of somatoform vegetative dysfunction take place in $17.9\% \pm 2.7\%$ of patients.

The group of patients with psychopathological manifestations of the organic brain damage amounts to 37.3% of all the examined persons; clinical picture is defined by the "organic triad" of signs: cerebroasthenia, emotional expansiveness as well as disorders in intellectual and mnestic processes.

In the structure of mental disorders dominate organic emotionally-labile (asthenic) disturbances ($44.9\% \pm 3.9\%$), disorders of the neurotic level ($33.5\% \pm 3.7\%$), and somatoform vegetative dysfunction ($21.6\% \pm 3.2\%$).

In the analysis of psychopathological manifestations in our patients, depending on the severity of the thyroid insufficiency, attention is drawn to the lack of significant differences in the incidence of the registered mental disorders in the euthyroid patients and in the group of patients

with thyroid deficiency, namely: organic emotionally-labile (asthenic) disorders ($38.8\% \pm 4.5\%$ and $35.0\% \pm 5.4\%$, respectively) and disturbances in the neurotic register ($26.4\% \pm 4.03\%$ and $30.0\% \pm 5.2\%$, respectively). Pronouncedness of the somatoform vegetative dysfunction in the group of euthyroid patients prevails significantly in the comparison with similar manifestations frequency in patients with the thyroid failure ($21.48\% \pm 3.7\%$ and $12.5\% \pm 3.7\%$, respectively, $p < 0,05$).

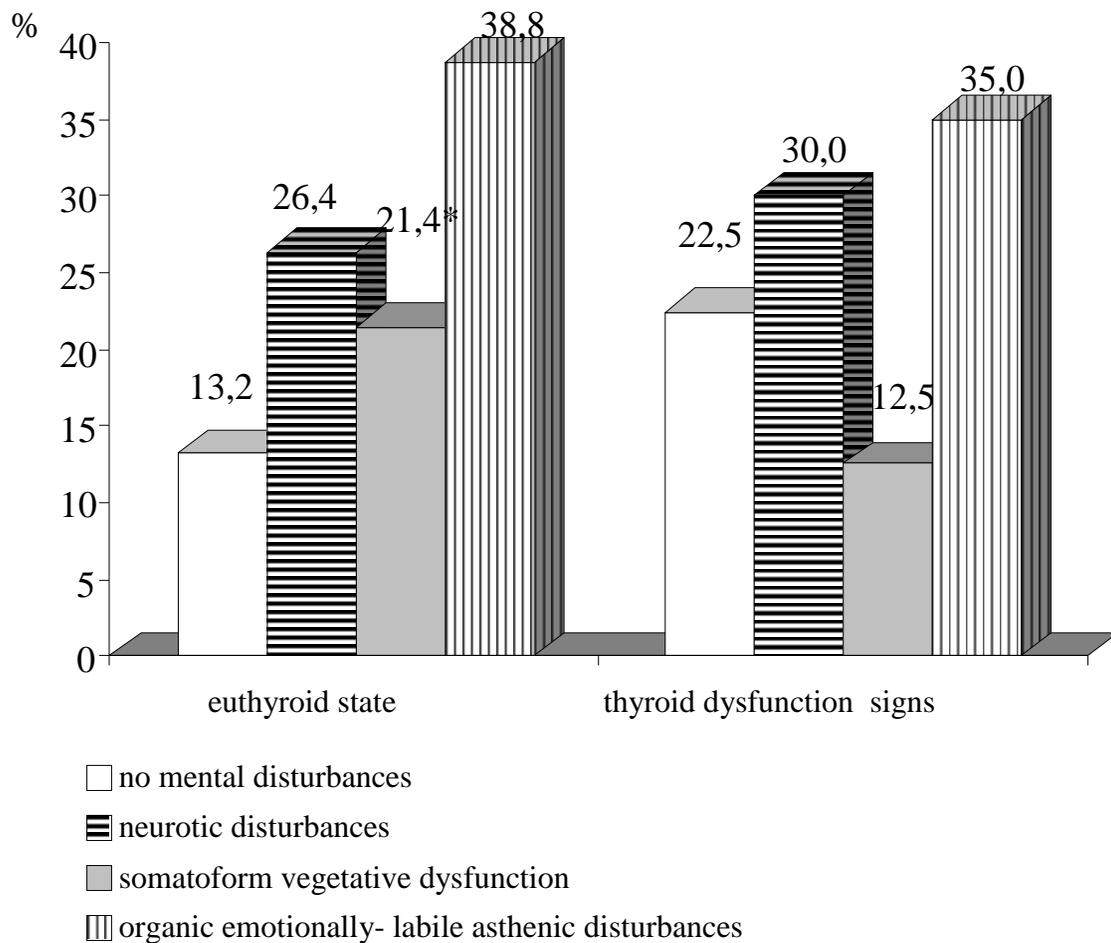


Fig.3. Mental disorders frequency in patients with NDG depending on the functional state of the thyroid

In the gender aspect the frequency of psychopathological disorders, depending on the degree of thyroid deficiency, is more pronounced. Disorders of the neurotic register in girls with the thyroid insufficiency exceeds twice the same in the group of euthyroid patients ($16.39\% \pm 4.7\%$ and $33.33\% \pm 8.7\%$, respectively, $p < 0,05$). And the severity of somatoform vegetative dysfunction predominates in the group of euthyroid patients, in comparison with the frequency of the same events in patients with the thyroid failure ($31.14\% \pm 5.9\%$ and $16.66\% \pm 6.9\%$ respectively, $p < 0,05$). No pathology has been observed in the mental sphere ($6.14.7\% \pm 4.6\%$ and $16.7\% \pm 6.9\%$, respectively) of the patients studied in the groups with euthyroid state and thyroid

insufficiency.

A significant prevalence of boys without mental pathology has been revealed in the group with the thyroid insufficiency, as compared with the group of patients with euthyroidism ($26.0\% \pm 6.2\%$ and $11.6\% \pm 4.2\%$, respectively). Disturbances in the neurotic register ($36.6\% \pm 6.2\%$ and $28\% \pm 6.4\%$), vegetative disorders ($11.6\% \pm 4.1\%$ and $10\% \pm 4.3\%$), and asthenic organic disorders ($40\% \pm 6.4\%$ and $36\% \pm 6.9\%$) without any significant difference have been recorded in the groups with various degrees of the endocrine pathology severity.

Thus, a variety of psychiatric symptoms has been revealed in 83.08% of patients with NDG. An organic asthenic disorder as a leading psychopathological damage at the nosologic level, irrespective of gender and the degree of thyroid insufficiency, has been registered in 37.7% and 40.0% of patients in the group with euthyroidism, and in 33.33% and 36.0% in the group with the thyroid failure in girls and boys respectively.

No significant differences in the frequency of the registered pathology in boys and girls ($81.8\% \pm 3.7\%$ and $84.6\% \pm 3.8\%$, respectively) have been revealed when comparing manifestations of the disease in terms of gender.

Comparing the total incidence of mental disorders in the population of school-age children, depending on the presence of thyroid pathology, attention is drawn to the fact that regardless of age and sex a significant excess of this pathology has been recorded in the group of children with NDG. Populational rates, obtained in the examination of schoolchildren by medical experts of our institute, are much lower.

Thus, our study has found that NDG in children at the age of 10 - 17 years is characterized by polymorphous clinical symptoms with prevalence of anxiety, emotional lability, tension, irritability, an increased mental and physical fatigue, recurrent headaches, and dizziness in the clinical structure. The above symptoms in various combinations with other symptoms partly mask the endocrine pathology that may complicate timely diagnosis of NDG at the present ontogenetic stage of the child development.

Conclusion. The results presented enable the authors to arrive at a conclusion that a convincing surge in the frequency of mental disturbances is characteristic of children with NDG.

The most common forms of mental disorders, recorded in the presence of the thyroid pathology, are: organic emotionally-labile (asthenic) disorder, neurotic disorders, and functional

vegetative disturbances.

Considering the state of their own health as a result of fatigue or age-related changes, many unsound people do not receive any treatment at all or appeal to different irrelevant specialists - cardiologists, neurologists, and pediatricians for aid without any results after the therapy. Only a thorough analysis of their complaints, physical examination, and the performed research make it possible to determine, whether the patient has endocrine pathology.

References

1. Zhukov A.O. (2007). Defitsit nastroyeniya, vyzvanny umstvennoy otstalost'yu i sindromom defitsita vnimaniya (kliniko-epidemiologicheskoye issledovaniye). [Mood deficiency caused by mental retardation and attention deficit disorder (clinical and epidemiological study).] *Journal of Neurology and Psychiatry. S. S. Korsakov*, 6, 4–16. [in Russian]
2. Mollayeva N.R. (2009). Моллаева, Н. Р. Psikhicheskoye zdorov'ye detey, prozhivayushchikh v yododefitsitnom regione (kliniko-epidemiologicheskoye issledovaniye). [The mental health of children living in the iodine-deficient region (clinical and epidemiological study).] *International Endocrinology Journal*, 6 (24), 52–60. [in Russian]
3. Pyatnitskiy N. Yu. (2001). Sravnitel'naya kharakteristika psikhicheskikh rasstroystv pri raznykh vidakh endokrinopatiy. [Comparative characteristics of mental disorders in different types of endocrinopathies.] *Social and clinical psychiatry*, 4, 10–13. [in Russian]
4. Shevchenko I.A. (2002). Subklinicheskiy gipoteroiz: obzor literatury. [Subclinical hypothyroidism: a literature review.] *Endocrinology Problems*, 2, 13–22. [in Russian]

Editorial Office

Global Academics. International Journal of Advance Researches

3401 Townsend Blvd. Suite 204. Jacksonville, FL 32277

United States of America.

Email: editor.globalacademics@gmail.com

Phone: +1-904-428-3807

+1-904-428-6275

Website: www.i-journal.org

Copyright © 2019 World War III Prevention Project, Corp.

All rights reserved.

ISSN: 2641-9823