



International Science Group

ISG-KONF.COM

XVII

**INTERNATIONAL SCIENTIFIC
AND PRACTICAL CONFERENCE**

**"SYSTEM ANALYSIS AND INTELLIGENT SYSTEMS FOR
MANAGEMENT"**

**Ankara, Turkey
May 02 - 05, 2023**

ISBN 979-8-88955-316-8

DOI 10.46299/ISG.2023.1.17

SYSTEM ANALYSIS AND INTELLIGENT SYSTEMS FOR MANAGEMENT

Proceedings of the XVII International Scientific and Practical Conference

Ankara, Turkey
May 02 – 05, 2023

PSYCHOHYGIENIC BASES OF PREVENTION OF THE DEVELOPMENT OF COMORBID CONDITIONS IN ADOLESCENTS WITH CHRONIC PATHOLOGY

Serheta Ihor

Doctor of Medical Sciences, Professor,
Head of the Department of General Hygiene and Ecology
National Pirogov Memorial Medical University,
Vinnitsya, Ukraine

Makarova Olha

PhD, Physician-pediatricist
Vinnitsya, Ukraine

Makarova Serhii

PhD, Physician-pediatricist
Vinnitsya, Ukraine

Psychohygienic aspects of functional state correction and prevention of comorbid conditions among adolescents and young adults suffering from chronic somatic diseases were studied on the basis of complex scientific research data. It was established that the presence of chronic pathology significantly affects the processes of formation of psychophysiological functions and personality traits of girls and boys and determines the need for the development and scientific justification of psychohygienic correction of the functional capabilities of their organism [1, 2, 3, 4, 5, 6, 7].

The results of the hygienic evaluation of the peculiarities of the processes of formation of the psychophysiological functions allow us to reveal a significantly lower level of development among adolescents with chronic somatic pathology of the criterion characteristics of visual-motor coordination, balance of nervous processes, critical frequency of fusion of light flashes, coordination of movements and muscle strength, as well as a completely comparable level of development among girls and boys suffering from chronic diseases and their practically healthy peers, of such indicators of the functional state of the organism as the mobility of nervous processes, linear eye measurement and muscle and joint sensitivity.

It was found that the presence of chronic somatic pathology has a very significant effect on the features of the personality structure of adolescents, first of all, causing the appearance of negative changes on the part of such properties of temperament and character as the level of neuroticism, levels of situational (reactive) and personal anxiety, indicators of character accentuations according to the anxious, dysthymic and pedantic types, the leading correlates of the level of subjective control and mental states, testifying to the predisposition of the girls and boys to the formation of pre-clinical changes in terms of mental health characteristics, the development of comorbid conditions

In the course of the conducted research, a scientifically based set of measures for psychohygienic correction of the functional state of adolescents suffering from chronic somatic diseases, the leading components of which are: correction of the main routine elements of daily activities; taking into account age-sex trends in the processes of formation of psychophysiological functions and personality traits of persons with chronic pathology in natural conditions of stay; optimization of the processes of mental, psychophysiological, and socio-psychological adaptation of schoolchildren to the conditions of performance of their usual activities on the basis of screening-research of the state of somatic and mental health and the use of personal questionnaires; organization of optimal movement mode; the use of measures for individual psychocorrection of the adaptive capabilities, taking into account the presence of poor conditions.

The use of the developed complex of psychohygienic correction measures has a beneficial effect on the processes of formation of the leading psychophysiological correlates of the functional state of the body of school-aged pupils and, above all, on the characteristics of higher nervous activity, the visual sensory system and the somatosensory analyzer, causing a significant improvement of 12.1% in girls and 33.8% in boys of balance of nervous processes indicators (in natural conditions by 2.0% and 5.6%, respectively), by 17.3% in girls and 14.0% in boys of balance of nervous processes characteristics (in the case of a traditional training mode, respectively by 3.5 % and 8.6%), by 10.1% in girls and 8.4% in boys of coordination of movements indicators (in natural conditions, an improvement by 1.5% and a deterioration by 8.2% were observed, respectively), by 23.8% , in girls and 18.3% in boys of the characteristics of measurement and muscle and joint sensitivity (with the traditional mode of education, deterioration of indicators was recorded by 4.7% and 7.1%, respectively).

The implementation of a complex of psychohygienic correction measures contributes, in contrast to the unfavorable trends characteristic of traditional learning conditions, to the emergence of positive changes in the anxious personality manifestations of students with chronic somatic pathology, causes a pronounced decrease in the degree of expression of negative characterological manifestations of emotional, anxious and excitable types , the appearance of very favorable changes from both a social and an educationally significant point of view in the characteristics of the level of subjective control in the field of educational and health or illness relations.

The data of the hygienic assessment of the degree of effectiveness of measures aimed at correcting the functional state of the body in the conditions of inpatient treatment indicate strong prospects for its use in clinical practice as a component of the treatment and rehabilitation process. Implementation of the developed approach makes it possible to have a pronounced positive effect on the characteristics of situational and personal anxiety, to stabilize the main characterological manifestations and indicators of the mental state of people with chronic somatic pathology in a short period of time.

As prognostic criteria for correcting the functional state of the body of adolescents with chronic somatic pathology and comorbid conditions, the following should be noted: the index of psychophysiological adaptation, which allows you to assess the

features of transformations that occur in the structure of the body's functional systems (psychophysiological prognostic criterion); the level of physical capacity, which reflects the degree of readiness of the body to perform maximum muscle activity and, accordingly, the energy potential of the adaptation resources of the body (adaptation-energy prognostic criterion); the generalized level of academic success in the main subjects that are subject to mandatory study in general educational institutions, which indicates the degree of social adaptability and academic performance of girls and boys (psychological-pedagogical prognostic criterion).

References:

1. Гончарук Е. Г., Бардов В. Г., Сергета І. В., Омельчук С. Т. Комплексна оцінка стану здоров'я дітей і підлітків як гігієнічна проблема: методологічні та прикладні аспекти (огляд літератури). *Журнал АМН України*. 2003. Т. 9, № 3. С. 523-541.
2. Сергета І. В., Бардов В. Г. Оцінка стану здоров'я дітей, підлітків та молоді і сучасні технології його збереження та зміцнення *Вісник Вінницького державного медичного університету*. 2003. Т. 7, № 2/2. С. 799-800.
3. Мороз В. М., Серебреннікова О. А., Сергета І. В., Стоян Н. В. Психофізіологічні та психогігієнічні основи ефективного використання здоров'язберігаючих технологій у закладах вищої освіти Вінниця: ТОВ "ТВОРИ", 2021. 208 с.
4. Сергета І. В., Браткова О. Ю., Серебреннікова О. А. Наукове обґрунтування гігієнічних принципів профілактики розвитку донозологічних зрушень у стані психічного здоров'я учнів сучасних закладів середньої освіти (огляд літератури і власних досліджень). *Журнал НАМН України*. 2022. Т. 28, № 1. С. 306-326.
5. Сергета І. В., Серебреннікова О. А., Стоян Н. В., Дреженкова І. Л., Макарова О. І. Психогігієнічні принципи використання здоров'язберігаючих технологій у сучасних закладах вищої освіти. *Довкілля та здоров'я*. 2022. № 2 (103). С. 32-41.
6. Тимошук О. В., Полька Н. С., Сергета І. В. Наукові основи комплексної гігієнічної оцінки якості життя та адаптаційних можливостей сучасної учнівської і студентської молоді. Вінниця: ТОВ "ТВОРИ", 2020. 272 с.
7. Makarov Serhii Y., Stoyan Nataliya V., Serheta Ihor V., Taran Oksana A., Dyakova Oksana V. Peculiarities of the interaction of the indicators of psychophysiological adaptation of modern students in the context of the effective monitoring of individual health of young women and young men. *Wiadomości Lekarskie*. 2019, tom LXXII, nr 5 cz II. P. 1053-1058.