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**THEORETICAL AND PRACTICAL SCIENTIFIC
ACHIEVEMENTS: RESEARCH AND RESULTS
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IV INTERNATIONAL SCIENTIFIC AND THEORETICAL CONFERENCE



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SECTION 19.

MEDICAL SCIENCES AND PUBLIC HEALTH

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HYGIENIC APPROACHES TO THE RATIONAL ORGANIZATION OF EDUCATIONAL ACTIVITIES OF PUPILS STUDYING IN SPECIALIZED LYCEUM CLASSES

Reforms of the educational sector taking place in Ukraine caused the wide spread of educational institutions of a new type, the main task of which is the formation of the intellectual potential of Ukraine. However, quite often the organization of the educational process in these institutions has a negative impact on the functional state of the pupils' organism, dictates the need to regulate their activities, and, above all, this concerns children who are just passing through the period of adaptation to new, unusual conditions of stay, which coincides with the critical development of the organism [1, 2, 3, 4]. Therefore, the search for the most effective means of influencing the personality of pupils, both due to the use of internal resources of their body, and as a result of the use of various methods of optimizing educational activities, becomes especially relevant.

The purpose of the study was to scientifically substantiate the hygienic foundations of the optimal mode of organization of educational activities of pupils who studied in new educational institutions – lyceum classes, which contribute to the preservation and strengthening of health, increasing the functional capabilities and adaptation resources of their organism.

The scientific work uses hygienic, psychophysiological, epidemiological methods, as well as methods of multidimensional statistical analysis.

In the course of research conducted using a set of indicators that determine the functional state of the leading psychophysiological functions and personality traits of junior school pupils, already during the second year of study, the obtained results indicated their significant deterioration. Moreover, during the third year of study, such trends almost did not recover, which indicated the undeniable dependence of the values of these indicators on the level of study load, which is primarily determined by the city, profile, mode and conditions of study. This opinion was confirmed by indicators of the state of health of lyceum pupils. Thus, dynamic shifts in indicators of eye diseases (due to myopia) and diseases of the musculoskeletal system (due to posture disorders) were characterized by their growth during the period of research in lyceum pupils, from 8.2% to 13.1%, respectively, and from 15.1% to 21.8% ($p < 0.05$). The share of children belonging to the II health group as a risk group was significantly higher in lyceum classes compared to general education classes - 46.2% versus 35.9% ($p < 0.05$). Among the lyceum pupils, there was

also a significant tension in the processes of the course of psychophysiological functions, which are determined precisely by the conditions of study.

The obtained data indicated the need to develop a comprehensive model-program for optimizing the educational activities of junior school pupils, the main defining features of which were the hygienic organization of educational and extracurricular activities of pupils, increasing the level of daily physical activity through the use of traditional and non-traditional forms of physical education and improving sanitary and hygienic conditions both at school and at home.

The use of the developed approach contributed to positive changes in the criterion indicators of the functional characteristics of the central nervous system. In particular, there was a significant ($p < 0.05-0.001$) reduction in the latent period of the visual-motor reaction, improvement in attention stability indicators, an increase in the level of memory (figurative, verbal, mechanical), thinking (figurative, divergent, verbal, logical and verbal-logical), visual sensory system and somatosensory analyzers.

The use of a complex model-program had a significant impact on morbidity rates: the number of disease cases decreased from 95.94% to 52.7% ($p < 0.001$), the number of days from 620.27 to 298.64 ($p < 0.001$). The proportion of children who did not get sick for a single day during the year increased: 56.75% versus 48.61% in the control ($p < 0.05$), no increase in the specific weight of myopia and postural disorders was determined. The proposed program for optimizing the educational activities of schoolchildren also contributed to a more pronounced, positive picture in terms of improving the level of academic success both in general and in individual subjects, primarily in reading and mathematics.

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