

# ΛΟΓΟ



DIE KUNST DES WISSENSCHAFTLICHE DENKEN

DER SAMMLUNG WISSENSCHAFTLICHER ARBEITEN

ZU DEN MATERIALIEN DER IV INTERNATIONALEN WISSENSCHAFTLICH-PRAKTISCHEN KONFERENZ

## GRUNDLAGEN DER MODERNEN WISSENSCHAFTLICHEN FORSCHUNG

31. MÄRZ 2023 • ZÜRICH, SCHWEIZERISCHE EIDGENOSSENSCHAFT 



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## **ABSCHNITT XXIII. MEDIZINISCHE WISSENSCHAFTEN UND GESUNDHEITSWESEN**

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### **ENVIRONMENTAL AND HYGIENIC ASPECTS OF THE FORMATION OF HIGH PROFESSIONAL CAPACITY OF MODERN PUPILS AND STUDENTS**

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At the current stage of the development of society, one of the most important tasks of preventive medicine should be considered the preservation and strengthening of health, increasing the level of social and professional capacity of children, adolescents and young people [1, 2, 3].

The aim of the conducted research was to study the ecological and hygienic aspects of the formation of high professional capacity of modern pupils and students who acquire various specialties in the conditions of modern educational institutions. Hygienic, psychophysiological, psychological, and professional methods, as well as methods of multidimensional statistical analysis, were used to achieve the goal.

Based on the data obtained in the course of research, as well as the results of correlation and cluster analysis of indicators of the functional state of pupils and students., a whole series of characteristics of the development of psychophysiological functions and personality characteristics, health status, characteristics of living conditions and lifestyle, as well as educational success, which have a clear interrelationship with criterion indicators of the level of professional suitability of pupils and students, the degree of which increases significantly during the time of stay in the educational institution. Several stable cluster groupings of the studied indicators were determined, primarily integral-adaptive personal-oriented, integral-adaptive environmental-oriented and microsocial-hygienic clusters, which determine the main directions of psychohygienic correction and prevention measures. A conceptual approach to predicting the professional fitness of pupils and students was developed, and during the step-by-step regression and factor analysis, scientifically based statistical models for forecasting the level of professional readiness, the level of prevalence of morbidity with temporary loss of working capacity and chronic morbidity were determined, and generalized criteria for prognostic assessment of professional fitness and the level of health were determined pupils and students at different stages of their stay at the educational institution.

It was revealed that the leading components of conducting effective and adequate to the set goals diagnosis, forecasting and correction of professional suitability and professional capacity of pupils and students are: taking into account data on the peculiarities of professional activity in the main medical specialties and

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railway transport specialties based on the results of the assessment of hygienic factors of the production environment; carrying out a professional assessment of specialties; analysis of the peculiarities of the processes of formation of psychophysiological functions and personality traits in the natural conditions of professionally oriented educational activities; adequate forecasting of changes that take place in the course of professional training as a result of the use of various methods of health-corrective direction, based on the use of statistical models; definition and practical application of preventive technologies for improving the functional state of the organism of pupils and students.

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