KAPITEL 3 / *CHAPTER 3* [3]
PSYCHOHYGIENIC DIAGNOSTICS OF THE HEALTH OF CHILDREN, ADOLESCENTS AND YOUTH: SCIENTIFIC BASIS OF EFFECTIVE IMPLEMENTATION

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Introduction

In recent years new promising technologies for comprehensive assessment of the health of children, adolescents and youth have rapidly burst into the theory and practice of preventive medicine and public health, the leading place in the structure of which is occupied by psychohygienic diagnostics of the leading correlates of mental and somatic health of school-age, adolescent and young adult individuals [10].

Psychohygienic diagnostics is a branch of preventive medicine that studies both an individual in inseparable unity with indicators of the morphofunctional state of his or her organism, and entire groups that are included in the system of relationships with the environment and social environment in order to determine the features of the transition of the organism' adaptive and compensatory reactions to the stage of latent, prepathological, premorbid, prenozological states for the further development of adequate and effective measures of psychohygienic correction and prevention that contribute to the preservation and strengthening of individual and population health [2, 10].

Therefore, the defining features of psychohygienic diagnostics should be considered to be taking into account the features of the morphofunctional state of the organism, the introduction of an adaptive-significant approach to assessing changes that may be registered in the leading correlates of mental health, and, above all, changes of a prenosological nature, and, ultimately, a clear orientation to solving problems of preventive content [7, 8, 9, 10].

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3.1. Psychohygienic diagnostics as a modern diagnostic and preventive tool

Psychohygienic diagnostics is one of the most important tools of psychohygiene, that is, a science that studies the state of a person's mental health and determines the features of its dynamic changes in connection with the effect on the human organism of natural, industrial and social factors, developing scientifically substantiated measures for active influence on the human organism and its environment in order to create the most favorable conditions for preserving and strengthening mental and somatic health [1, 2].

A number of studies identify two leading areas of psychohygiene, namely hygienic premorbid diagnostics, which is aimed at determining the presence of prepathological states in the context of causal relationships between a person and the environmental and social environment, and hygienic premorbid diagnostics for primary prevention of changes in the mental health of various and various population groups [2, 5].

Psychohygienic diagnostics as a diagnostic and preventive tool is distinguished by its simplicity, reliability and high level of informativeness. It is these features that determine its extremely high spread at present both in the field of hygienic research and as an important component of various preventive programs.

However, to date, scientific principles and applied principles for the implementation of adequate psychohygienic diagnostics, which fully comply with the basic provisions of evidence-based medicine and bioethical postulates, have not been developed.

The aim of the scientific research was to develop and substantiate the scientific principles of psychohygienic diagnostics of the health of children, adolescents and youth as an integral component of research aimed at carrying out an objective assessment of the health of schoolchildren and students.

The research, during a number of psychophysiological functions and personality traits of 225 young women and 210 young men boys 14-20 years old, which determine the success of the processes of psychophysiological and mental adaptation of pupils of

modern secondary schools and students of higher educational institutions, were subject to in-depth study, was conducted on the basis of general educational institutions of the city of Vinnytsia and National Pirogov Memorial Medical University, Vinnitsya.

In the course of scientific work, based on chronoreflexometry data, the degree of expression of such psychophysiological functions as the speed of simple and differentiated visual-motor reactions, the mobility and balance of nervous processes, the values of the critical frequency of merging light flashes, indicators of coordination of movements, indicators of stability and switching of attention and criterion characteristics of mental performance were determined [3, 4]..

The features of temperament were determined based on the use of Eysenck and Rusalov personality questionnaires, the features of anxiety manifestations of the personality – by using of Spielberger and Phillips personality questionnaires, leading characterological traits were determined based on the Cattell and Shmishek personality questionnaires, the degree of expression of subjective control indicators of the personality – by using of the Rotter personality questionnaire, the level of aggressive manifestations were determined based on the use of the Bass and Darki personality questionnaire, the level of expression of emotional burnout – by using of Boyko personality questionnaire, the tendency to develop a depressive state determined based on the uhe Zung psychometric scale, the level of expression of an asthenic state – by using of the Malkova personality questionnaire [3, 4].

Statistical analysis of the obtained results, which involved the implementation of descriptive statistics and the application of correlation, cluster and factor analysis procedures, was carried out on the basis of the use of the standard multivariate statistical analysis application package “Statistica 6.1” (license number AXX910A374605FA).

The basis for conducting adequate psychohygienic diagnostics is the concept of psychohygienic influence on the processes of forming, preserving and strengthening human health, the leading components of which include: a methodological component, which consists in developing a preventively-oriented methodology for studying mental health, a diagnostic component, which involves determining adequate diagnostic

approaches to assessing the characteristics of a person's personality, a preventive component, which provides for the justification of preventive technologies for preserving somatic health by strengthening mental health based on the use of various means of psychohygienic influence on the personality, as well as a prognostic component, which involves the introduction of a systematic approach to the process of predicting mental health [7, 8, 9, 10].

An important place from the standpoint of adequate psychohygienic diagnostics is occupied by the objective interpretation of the features of prenosological changes in the state of mental health as states that are intermediate between the norm and pathology and qualitatively different according to the nature of psychopathological and psychoneurological phenomena, especially since the spread of various prenosological changes in the state of mental health of modern youth is quite high and is characterized by a significant variety of their clinically defined manifestations [7, 8, 11].

That is why prenosological changes in the state of mental health are defined either as certain health states that do not meet the criteria of the average statistical norm, or as certain subthreshold mental and behavioral disorders, or as a violation of the course of adaptation processes, or as a pre-disease state [11].

It is also undeniable that the formation of prenozological changes depends on the influence of such factors as housing and social conditions of life, factors of the internal educational environment, intrafamily relationships, the level of educational adaptation, the characteristics of the development of psychophysiological functions and personality traits [9, 11, 12].

Ultimately, to conduct adequate psychohygienic diagnostics, it is necessary to take into account that there are certain levels of mental health, namely: the level of psychophysiological health, which is determined by the characteristics of the neurophysiological organization of mental processes, the level of individual mental, psychological and somatical health, which is characterized by the ability to use adequate methods of implementing meaningful efforts of the individual, and the level of personal health, which is determined by the quality of meaningful human relationships [6].

3.2. Scientific principles of psychohygienic diagnostics of the health status of children, adolescents and youth

Taking into account the above, it should be noted that the scientific principles of psychohygienic diagnostics of the health status of children, adolescents and young people, which are fully adequate to the requirements of modern preventive medicine, are:

- introduction of a comprehensive approach to the study of personality traits;
- objectification and meaningful filling of the methods used;
- ensuring the reliability and validity of the diagnostic techniques used;
- implementation of the systematic nature of the use of diagnostic tools.

Thus, the introduction of a comprehensive approach to the study of personality traits allows us to present a holistic picture of the individual coloring of personality manifestations of any person, which is provided by collecting data according to the standard LQT triad (life – question – test): L-data – data obtained as a result of studying certain mental manifestations that occur in a person's real life; Q-data – data obtained on the basis of the use of personality questionnaires and other methods of self-assessment with mandatory consideration of the presence of certain deviations from the truth due to the influence of reasons that have a cognitive (low intellectual and cultural level, etc) or motivational (desire to hide defects that occur, etc) content; T-data – data obtained using objective test methods in conditions that are strictly controlled, and, therefore, the subject does not have any information about which personality characteristics the testing is aimed at assessing.

The practical implementation of a comprehensive approach to the study of personality traits also confirms the fact that the main ways to increase the objectivity of quantitative and qualitative assessment of health status during psychohygienic diagnostics are the introduction of an individualized approach based on the use of scales of integral criteria for assessing the processes of forming a morphofunctional state, psychophysiological functions and personality traits, namely: methods (scales) of complex scoring and integral indicators themselves.

In the course of our research, the following methods of complex scoring have been developed: a screening method for assessing the degree of risk of prenozological deviations in the mental health of pubescent students; a method for comprehensive hygienic assessment of the occurrence of disorders of the visual sensory system among adolescents aged 14-16 who are in conditions of high visual and information loads; a method for determining the psychophysiological readiness of the pupils and students for the successful performance of professional activities; a method for comprehensive scoring of the degree of risk of sexually transmitted diseases among young people; a method of comprehensive scoring of the level of psychophysiological and mental adaptation of secondary school pupils and high school students, as well as such integral indicators as: psychophysiological adaptation index; express stress indication index; behavioral (behavioral) well-being index, etc [7, 8, 9, 10].

Objectification and content of the methods used is determined by the content-psychological orientation of the strategy for developing and applying diagnostic tools, the main means of which should be considered: normative-oriented testing, which involves comparing the obtained results with the average standardized indicators of a certain population; criterion-oriented testing, which, as an interpretative system, defines a specific field of diagnosis; psychosemantic testing, which consists in identifying the degree of expression of responses in the case of presenting certain subjectively significant sets of stimuli (words, situations, persons, etc), which differ according to their nature and content.

The experience of using various means of psychohygienic diagnostics testifies to the fact that each of the above means should be implemented in the appropriate case. Thus, in the case of the need to determine the age-sex trends in the development of individual psychophysiological functions or personality traits in natural or preformed conditions, as well as to compare the patterns of their formation with standardized normative indicators characteristic of certain age-sex groups, the most significant should be considered the implementation of normative-oriented testing.

Conducting criterion-referenced testing is most appropriate in the case when the field of diagnosis is to conduct an in-depth assessment of the development of a

particular personality trait in terms of age, gender, social, educational or professionally significant aspects, and to assess the degree of expression of prenosological changes and borderline states that form a certain premorbid background of changes in the mental health of children, adolescents and young people.

Ultimately, the main area of application of psychosemantic testing is the assessment of certain generalized in content both psychohygienic and general complex medical categories, for example, the assessment of the quality of life of pupils and students.

Ensuring the reliability and validity of the diagnostic techniques used, first of all, determines a high degree of probability of obtaining identical results in the event of repeated testing, ease of interpretation and dissemination of the results obtained, as well as their relevance and practical significance.

In this regard, the leading psychodiagnostic technologies that have the most significant prospects for widespread use in the practice of modern psychohygienic diagnostics should be considered the use of personality questionnaires (determination of the degree of expression of indicators that are evaluated according to a number of diagnostic signs, which are presented in the form of certain systems of the "question – answer" or "question – choice from a set of several answers"), projective methods (determination of the degree of expression of indicators based on the reflection by the person under study of his subconscious experiences, motives, complexes and needs in response to insufficiently clearly structured stimulus material that is presented, based on the use of associative, interpretative, constructive or additive methods), repertoire methods (personally significant implementation of a certain activity in specially created conditions), as well as tests of success and achievements (objective personally significant assessment of the level of mastery of a certain type of activity) [2, 3, 4].

Ultimately, the implementation of the systemic nature of the use of diagnostic tools provides an opportunity to select and implement a highly specialized, yet multifaceted battery of tests, which represents a group of test methods aimed at an in-depth comprehensive study at the time of the study of both different levels of development and structural components of personality characteristics, as well as the

personality as a whole.

In the course of our research, a universal battery of test methods has been developed, suitable for solving priority tasks of psychohygienic diagnostics, the leading components of which are the assessment of the level of development of psychophysiological functions (determination of simple and differentiated visual-motor reaction, mobility and balance of nervous processes, assessment of the values of the critical frequency of merging of light flashes, coordination of movements, stability and switching of attention, etc.), implementation of an in-depth assessment of temperament features (personal questionnaires of Eysenck, Rusalov, etc.), anxiety features (personal questionnaires of Spielberger, Phillips, etc.), character features (personal questionnaires of Mini-mult, MMPI, Shmishek, Cattell, etc.), features of motivational direction and subjective control (personal questionnaires of Rotter, Boyko, Herbachevsky, Plutchik-Kellerman-Conte, etc.), as well as features of mental states (personal questionnaires of Malkova, Basa-Darki, Boykg, Luscher's color selection method, Zung's psychometric scale, etc).

Conclusions

Thus, in the course of the research, scientific principles for implementing psychohygienic diagnostics of the health of children, adolescents and young people adequate to the requirements of the present day have been developed and substantiated, which include: the introduction of a comprehensive approach to the study of personality characteristics, objectification and meaningful filling of the methods used, ensuring the reliability and validity of the diagnostic techniques used, and the implementation of the systematic nature of the use of diagnostic tools.