

*Materials of Conferences***THE FORMATION OF MEDICAL KNOWLEDGE IN THE TRAINING OF TEACHERS IN HIGH SCHOOL DEFECTOLOGISTS**

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Considering the strategic importance of education at the present stage of development, the President of Kazakhstan's Republic Nursultan Nazarbayev stressed: «The competitiveness of the nation, primarily determined by the level of education».

Training of highly qualified professionals is updated in the content of the «Concept of Education's Development of Kazakhstan Republic till 2015», which states that the main trend in higher education is reduced to improve the quality of training, development of innovative education, integrated with intensive research activities, close relation of university research with the needs of the social sphere and economy, improve education and information technology» [1, 2].

Professional activities of the teacher-pathologists goes beyond traditional teaching activities, and working closely intertwined with various social, educational, rehabilitative and consultative-diagnostic, psychotherapeutic, proper corrective and other «non-teaching» activities, being directed toward one goal – to promote a person with disabilities in the life of his social adaptation and integration by means of special education. Contemporary teacher education includes a wide range of relevant pedagogical professions: tiflopedagogics; ASL; oligophrenopedagogics, speech therapy, special pre-school pedagogy [3].

Remedial work with children with disabilities has specific requirements for the professional preparedness of the teacher-pathologists.

Preparation of teachers is carried out according to the educational standard of higher pedagogical education, which in turn is based on the Law «On education». Standard provided by the various standard period of study, content and purpose of professional education programs. There are qualifications of graduates of pedagogical high school, the requirements for the level of training specialist represented in the educational standard [5].

The main educational program includes the study of common humanitarian and socio-economic, general sciences, and disciplines of subject training.

The subject unit is the main part of the learning time and is aimed at developing content-specific science, as defectology. Here we consider the medico-biological and psycho-pedagogical cycles. Psychology and education section includes a discipline

involving the mastery of pedagogical and psychological foundations of culture, various technologies of communication, management, self-regulation. Its content is aimed at building skills of self-construction of educational processes through the author's school programs, differentiated and individual personal approach to a student.

Medico-biological section includes disciplines such as anatomy, physiology, pathology of hearing, sight and speech fundamentals of neuropathology; basis of pediatrics, the basics of neurophysiology and neuropsychology, genetics, clinical features of children with disabilities of development; psychopathology; age physiology and school hygiene and others.

The system of medical knowledge, being part of the professional culture of teachers, speech pathologists, promotes the fundamental nature of his educational training, which is an important condition for the approximation of national practices of higher education to international standards. Medical expertise serves measure of the effectiveness future teachers-defectologists' training and determined in accordance with state standards, is characterized by formedness of medical knowledge and skills for diagnosis, differentiation, identify the main symptoms and syndromes within defectological activities for making the correction and rehabilitation programs to improve the quality of children's life.

For example, «Clinical features of children with disabilities», along with other disciplines of health – the biological cycle of the course – the scientific basis defectological education and is of particular importance in the preparation of qualified specialists. Students learn the modern interpretation of the doctrine of mental retardation, etiopathogenetic regularities and classification of intellectual disorders; clinical – psychological structure of intellectual deficiency in various forms of mental deficiency. The knowledge of clinical manifestations of mental underdevelopment of children should be in practice of defectologists: to organize a differentiated system of correction – rehabilitation measures with the aim of social – work adaptation of children with disabilities; when deciding on the direction of children with various deviations psychophysical development in special correctional institutions. After studying the discipline, students will be able to apply in practice the knowledge obtained in a study of this discipline; collect history data for the compilation of clinical psychology – teaching performance and to determine the etiopathogenetic mechanism of violations of intelligence and analyze scientific – methodical and professional literature on defectology; taken into account when the clinical forms of mental disorders correctional complex – rehabilitation measures aimed at the social – working adaptation of children with disabilities.

«Age physiology and school hygiene» gives an idea of general patterns and characteristics of growth and development of the child's body, learn to distinguish normal from disease and to use the mechanisms of compensation and adaptation for the correction of abnormal child's development; teach a differentiated approach taking into account the structural features and functions of the child's body. It teaches students of physiology and hygiene through training and educational process, work and rest schedules of students to master the minimum knowledge in hygiene and medicine. «Age physiology and school hygiene» is the basis for the study of psychology and pedagogy, and science with these forms, as an essential link natural science foundation of the entire system of teacher education.

For defectologists, who works in specialized support agencies the knowledge of morphological and functional characteristics of an organism of the child is particularly important, since it is in the making, if not the organization of living conditions, particularly easy to experience various abnormalities in the nervous system, musculoskeletal system, cardiovascular system, etc.

«Age physiology and school hygiene» as a functional-theoretical discipline biomedical training of special preschool and child care centers, provide knowledge of the object of future professionals, promotes the formation of scientific concepts for understanding the structure, form and function of the developing child's body when exposed to different environmental factors, provides a holistic view of the patterns structure the child's body as a whole and its parts, instills the necessary practical skills, and provides a theoretical basis for the successful study of subjects related to practical activities.

Based on the requirements of the qualifying characteristics of the specialty «Defectology» for the course «age physiology and school hygiene» the main tasks of teaching students are:

- to equip students for future defectologists – teachers of special care facilities, the necessary knowledge about their age structure and function of the child's body, the general laws of development and functional state of the child's body for a rational organization of educational work, to study the structure, shape the child's body and its component tissues, organs and systems based on the latest achievements of macro-and microscopic anatomy embryology, anthropology, biomechanics, biophysics, biochemistry, physiology, human physiology; examine patterns of individual organs and systems of mutual respect and taking into account exposure to external environmental factors and mechanisms regulation of the functions of the developing organism and in the process of studying the age of anatomy and physiology to establish and describe the structure, shape, position of organs and systems and their relationship to sex and taking into account individual characteristics of the developing organism, differentiated versions of variability, malformations; develop

students' scientific concept of the unity of structure and function of human organs, their variability in the process of phylogeny and ontogeny as a whole under the influence of the changing environment, working conditions, social conditions and physical exercise on the structure and development of the organism to study the physiological mechanisms for such complex mental processes such as sensation, perception, attention, memory, physiological bases of speech and emotional reactions, be able to determine the integral and partial indicators of biological age, the morphological criteria of physical health, to arouse the students' keen interest in the problems arising on the border of teaching and physiological sciences, to develop in future employees working in institutions and teachers defectologists ability to independently seek out and acquire new anatomical and physiological knowledge that is necessary for them to improve the educational work, to learn certain types of emergency assistance.

Discipline «Fundamentals of neurophysiology and neuropsychology» is a necessary step in studying the problems associated with visual, auditory and speech pathology, a violation of attention, memory, thinking, emotional states, voluntary movements, actions and behavior in general. This discipline is particularly important in preparing of defectologists, as reveals features of the neuropsychological processes in individuals with the only restriction capabilities, provides insight into the systemic violations of the mental processes that occur as a result of the defeat of individual sections of the cerebral cortex and subcortex. On the basis of this discipline is possible to build a science-based adequate understanding of the abnormal development of children and adolescents, the construction of correction – the educational process. Teachers – defectologists preparation must equip them with knowledge of regulatory mechanisms of neurophysiological processes, to introduce the neuropsychological mechanisms at work skin – kinestichal, visual, auditory, vestibular analyzers. On employment in the discipline much attention paid to speech, motor and mental disorders due to developmental defects, as well as local lesions of the speech apparatus and its centers, conductor of the CNS. Students are introduced to disturbances of higher mental functions in local brain lesions.

Students learn the neurophysiological and neuropsychological bases of functioning of the brain:

- understand the concept of systemic violations of the physiological and psychological processes associated with individual portions of the cerebral cortex and subcortex;
- to have information about functional asymmetries of the cerebral hemispheres;
- to have representation on the organization of higher mental functions and behavior in general at abnormal development of children;
- to know syndromes and methods of neurophysiological and neuropsychological inspections of patients at local brain lesions;

– should know the bases of neurophysiological and neuropsychological status at abnormal development of children and correlate them to functional and local brain lesions.

The aim of «psychopathology» is preparation of highly skilled experts in the field of correctional pedagogics and the special psychology, using knowledge in professional work and scientific work and ability on psychopathology of children's age.

The psychopathology of children's age opens features of mental activity of the sick child, gives representation to students about an aetiology, pathogeny mental infringements, shows clinical forms and their current, indemnification ways, defines a role and value of the teacher-pathologists in system of medical-pedagogical rehabilitation of sick children.

The course of psychopathology of children's age is included into curricula of all branches of pathological faculties and is obligatory in preparation system of pathologists. At studying of lessons such tasks as, acquaintance the students with the general laws of development of psychological diseases and psychopathological syndromes, preventive maintenance and rendering assistance principles are realised; with age levels of psychological reaction and communication with them certain psychological frustration; with the correlative contribution biological and social factors in occurrence of mental illnesses; with value of the critical periods in occurrence and a current of mental illnesses; to integrate the received knowledge of psychopathology of children's age into the basic information received by students at studying of other disciplines of a medical and biologic cycle, being a basis for mastering of disciplines of a psihologo-pedagogical cycle; with a role and a place of the expert- pathologists in the system of medical-psihologo-pedagogical rehabilitation of children with mental deviations.

Thus medical preparation is considered as systematic pedagogical process which is under construction on principles of medical orientation, a humanisation of educational process, strengthening in the curriculum of study disciplines, that provide increase of medical competence of the future correctional teacher [6].

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INNOVATIVE TECHNOLOGIES OF TREATMENT OF THE INFECTED RUSSIAN ACADEMIES OF SCIENCES IN EXPERIMENTAL SURGERY

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The aim of the research is to assess efficacy of the two new original ointments and electro-magnetic radiation at nitric oxide (150 HGz) absorption and radiation molecular spectrum frequency in experimental wound infection treatment.

Eight groups of white mice (10 mice in each group) were caused cutaneous back wounds which were infected with *Pseudomonas aeruginosa* clinical strain.

The first group of mice wasn't treated, the wounds of the second group of animals were treated with the ointment «Laevomecol», the wounds of the third group – with ointment № 1 and the wounds of the fourth group – with ointment № 2 respectively. The wounds of the fifth group were irradiated with electromagnetic radiation of experimental parameters. The sixth, seventh and eighth groups were given joint treatment with electro-magnetic radiation and the ointments «Laevomecol», № 1 and № 2 respectively.

The experimental ointment №1 contained essential oils of fennel and amaranth, the ointment № 2 was different in additional element chloramphenicol. The number of *P. aeruginosa* cells in the purulent discharge was studied by measuring of tenfold dilution seeding on meat infusion and by counting the number of colonies on the fourth, eighth and eleventh days of treatment.

It was determined that significant difference in the number of *P. aeruginosa* cells in the purulent discharge appeared on the eighth day of the treatment: its figures appeared to be lower than those in the control groups of mice treated with the ointments «Laevomecol» and № 2 as well as their combinations with electro-magnetic radiation.

On the twelfth day of treatment such dynamics continued with reliably lower number of microbial cells in the group treated with electro-magnetic radiation with the ointment № 2.

The use of electro-magnetic radiation at nitric oxide absorption and radiation molecular spectrum frequency with ointments containing essential oils of fennel and amaranth either with chloramphenicol or without it improves efficiency of experimental *P. aeruginosa* infection treatment.

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