

CONCEPTUAL ASPECTS OF THE PROBLEM OF PREVENTION OF DISCALCULIA IN ELDER PRESCHOOL AGE CHILDREN WITH GENERAL SPEECH DISORDERS

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Annotation. The article describes the main conceptual approaches to the problem of preventing dyscalculia in older preschool children with general speech disorders.

Key words: dyscalculia, prevention, conceptual aspects, general speech underdevelopment, older preschool age.

The rapid development of mathematical science and its penetration into various fields of knowledge explains the importance of mastering elementary mathematical concepts in older preschool children.

Psychologists and neuropsychologists note that mastering even elementary mathematical concepts is possible only under the condition of a sufficiently high level of formation of many mental functions: thinking, perception, memory, attention, imagination, etc. (R.I. Lalaeva, A.R. Luria, N. A. Menchinskaya, L. S. Tsvetkova and others). Therefore, children of preschool age with severe speech underdevelopments (TSP), namely with general speech underdevelopment (GAD), experience particular difficulties in mastering elementary mathematical concepts, even under the condition of systematic purposeful pedagogical teaching [2]. The pupils have an insufficient mastery of the terms of the mathematical dictionary, an inaccurate idea of the appearance and graphic display of numbers, they mechanically reproduce the order of the numbers, they find it difficult to determine the place of numbers in a row of natural numbers, it is difficult

to establish the relationship of the number to its "neighbors", they also have insufficient knowledge of the composition of the number, difficulties in mastering the rules for the formation of numbers, the lack of formation of quantitative relations of numbers and elementary methods of performing arithmetic operations (children do not rely on rules, but on external actions, use the "manual" method of counting), etc. [2; 3].

Lack of special attention to mastering counting operations by preschoolers with GSU can lead to dyscalculia at school age. According to L.B. Bariaeva, dyscalculia is a partial violation of counting activity, manifested in persistent, repetitive mathematical errors caused by insufficient formation, on the one hand, of the processes of receiving and processing sensorimotor information and, on the other hand, "mathematical speech", leading to a decrease in the level of culture of knowledge of mathematics [1].

It should be noted that the ideas of scientists about dyscalculia are not equal. There are a number of conceptual approaches to understanding the problem of dyscalculia prevention. The predisposition in older preschool children with GSU to the occurrence of dyscalculia is explained by the action of various factors that are significant for mastering counting. Some researchers, such as A. Germakovska, R.I. Lalaeva, S.L. Shapiro, note that dyscalculia correlates with gnostic-praxis disorders (a violation of digital gnosis and praxis in combination with an unformed orientation in the scheme of one's own body, constructive apraxia), and is very often accompanied by impairments in the acquisition of written speech [1; 2]. This usually manifests itself in students with SSU. Dyscalculia is considered here in connection with dysgraphia, when children make mistakes in spelling numbers, mix the positions of numbers when carrying out written counting operations - this is a gnostic-praxical approach.

Based on the cognitive approach (G.M. Kapustina, K.S. Lebedinskaya, M.S. Pevzner, and others), impaired counting is associated with the lack of formation of perception, memory, attention, thinking. Difficulties that younger schoolchildren with SSU experience in mastering educational material in the Russian language, reading and mathematics, and their psychological reasons can be divided into three groups.

The first group of difficulties is associated with deficiencies in the formation of motor skills in writing and reading.

The second group of difficulties is due to the peculiarities of the formation of the cognitive component of writing, reading and computational skills.

The third group of difficulties is associated with deficiencies in the formation of the regulatory component of writing, reading and computational skills.

Proceeding from the neuropsychological approach (A. Germakovska, A. N. Kornev, R. I. Lalaeva and others), the connection between dyscalculia and the lack of formation of a number of speech and non-speech mental functions is distinguished. In her research A. Germakovska reveals in children with dyscalculia an insufficient level of development of many mental functions that have a negative impact on the process of mastering counting operations: simultaneous and successive analysis and synthesis; logical operations of serialization and classification, visual-spatial functions, temporal representations, mnemonic processes, speech development. Systemic speech disorders, lack of formation of phonemic functions, underdevelopment of the lexico-grammatical aspect of speech, reading and writing disorders have a significant negative impact on the process of mastering counting operations. This leads to difficulties in mastering mathematical concepts, special terminology, to disturbances

in the perception of the text of the problem statement and other symptoms [1; 2].

Based on the considered conceptual approaches, it becomes necessary to identify risk factors for dyscalculia in older preschool age and conduct speech therapy work to prevent it.

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