

REVIEW OF CRITERIA FOR ASSESSING THE DEVELOPMENT OF PSYCHO-SPEECH FUNCTIONS IN CHILDREN UNDER 6 YEARS OLD

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Abstract. *Psycho-speech development of children is a process that includes the development of mental and speech abilities in children from birth to adolescence. It includes various aspects such as motor skills, cognitive abilities, social interaction and language development.*

Keywords: *motor skills, cognitive abilities, social interaction and language development, genetic characteristics, environment, cultural and social factors.*

INTRODUCTION

Psycho-speech development of children is a process that includes the development of mental and speech abilities in children from birth to adolescence. It includes various aspects such as motor skills, cognitive abilities, social interaction and language development.

In early childhood, children begin to develop motor skills, master movement and coordination skills, and begin to experience the world through visual and auditory perception. At this age, children also begin to show interest in social interaction and learn to communicate with people around them.

Subsequently, children begin to develop cognitive abilities such as perception, memory, logical thinking and problem solving. They also begin to develop their speech abilities, mastering phonetics, vocabulary, grammar and speech practice.

It is important to note that psycho-speech development in children can be different and depends on many factors, such as genetic characteristics, environment, cultural and social factors. Therefore, to determine the level of development of a child and identify delays, experts use various scales for assessing psycho-speech development.

The purpose of the study is to review and compare various scales of psycho-speech development of children as a tool for assessing and monitoring the development of speech and mental functions in children at different stages of their growth. As a result of a literature review of methods for determining delayed psycho-speech development, their application to children with developmental disorders and our own observations, the proposal of alternative criteria for assessing psycho-speech functions over time.

Research objectives:

1) Analytical review of specialized literature on the research topic, existing standardized scales for determining the level of psycho-speech development of children, applicable to children with organic lesions of the central nervous system

2) Assessment of qualitative and quantitative psycho-speech disorders in children with developmental disorders of varying severity using questionnaires before and after rehabilitation.

4) Analysis of the data obtained, comparison and averaging of indicators and their subsequent classification.

5) Formation of criteria for assessing psycho-speech development based on the data obtained.

Research method:

1. Clinical and neurological examination (including the results of instrumental diagnostic methods - neuroimaging, functional methods)

2. Assessment of psycho-speech functions using questionnaires, comparison with indicators in the table

3. Comparison of the obtained data over time (1st day – 30th day – 90th day).

As a result of a review of several scales, namely the Communication and Symbolic Behavior Scales (CSBS), Denver Developmental Screening Test (DDST), Bayley Infant Development Scale-III, Selchen Scales of Psycho-Speech Development (Selchen's Scale) the following important points were highlighted.

1. Communication and Symbolic Behavior Scales (CSBS)

The CSBS is used to assess children aged 6 months to 2 years and focuses on social interaction, social use of gestures and facial expressions, development of phonic production and first words.

The present scale focuses on the early stages of communication and symbolic behavior, but is limited to early childhood. But here less attention is paid to the phonetic and grammatical aspects of speech.

2. Denver Developmental Screening Test (DDST)

The Denver developmental screening test is known for identifying children suffering from mental retardation between the ages of birth and 6 years. It contains 4 scales: personal and social sphere; fine motor and adaptive skills; language; gross motor skills.

Children who complete all points are considered to be developing normally. If there is one unfulfilled point in any scale, the result is considered doubtful; two unfulfilled points mean developmental delay.

Its positive aspects are a wide age range (from birth to 6 years), a comprehensive assessment, including the personal and social sphere, fine and gross motor skills, and language.

The disadvantages of the Denver Early Development Scale include less specialization in the development of speech and language, as well as the likelihood of the need for additional scales for in-depth assessment of speech development.

3. Bayley scales of infant and toddler development 3rd Edition: Screening Test Manual.

This scale is intended for children from 1 to 42 months and assesses cognitive, motor development, language development, social-emotional development, and adaptive behavior.

The Bayley Scale allows for a fairly detailed and comprehensive assessment of mental development, covering cognitive, motor, language, socio-emotional development and adaptive behavior.

The disadvantages of this technique are that it can be used among young children (from 1 to 42 months), it is time-consuming and resource-intensive to conduct - the test takes from 25 to 60 minutes per child, which can be burdensome for a practitioner. In addition, this test requires the highest psychological qualifications of a specialist.

4. MacArthur-Bates Communicative Development Inventories (CDI).

The CDI is used to assess language development in children aged 8 to 30 months and includes vocabulary development, use of gestures, development of grammatical skills, ease of use and parental involvement in completion, focus on early language and use of gestures.

However, it is limited to the age range (8-30 months) and is less detailed in assessing other aspects of mental development.

5. Munich Functional Development Diagnostics (MFDD).

This scale covers children from birth to 6 years of age and assesses speech and language development, cognitive development, motor development, social and emotional development.

The advantage of this method is its comprehensive approach, covering different aspects of development (speech, cognitive, motor, social and emotional development), applicability for children from birth to 6 years.

The disadvantages are less specialization in speech development compared to other scales and the time requirement for a full assessment.

6. Method for quantitative assessment of a child's motor, speech and mental functions (Zhurba L.T., Timonina O.V.).

A method for quantitative assessment of a child's motor, speech and mental functions for early detection of age-related developmental delays is carried out by a quantitative assessment of a point system, where the assessed functions and their quality correspond to certain points from 0 to 4, presented in the table. The optimal total score on the scale corresponds to 30 points. A score of 27-29 points is a variant of the age norm in the event that the child loses one point on various functions. Children with a score of 23-26 points are classified as an absolute risk group, 22-13 points - to a group with severe delay in psychomotor development.

The disadvantage of this method is the age restriction, that is, this map is applicable only for children under 1 year of age and is rather aimed at a quantitative assessment of psychomotor development in correlation with perinatal lesions of the child's organs and systems, if any. The target orientation for assessing the early development of a child justifies a set of indicators, such as dynamically changing functions: the ratio of sleep and wakefulness, muscle tone, unconditioned reflexes, chain symmetrical reflexes, sensory reactions, vocal reactions, diagnosed by this technique.

7. Table of indicators of neuropsychic development of children 1 year 3 months – 4 years (Pechora K.L., Pantyukhina G.V., Golubeva L.G.).

The technique is a qualitative assessment of a child's development without using scores. Consists of 3 age scales for the first, second and third years of life. In the 1st year, the development of visual and auditory indicative and emotional reactions, the development of general movements, actions with objects, the preparatory stages of passive and active speech, understanding and active speech are examined. In the 2nd year: development of speech understanding, development of active speech, sensory development, development of play and actions with objects, development of movements, formation of skills. In the 3rd year: in the first half of the year: active speech, play, constructive and visual activities, sensory development, movement development, skill development. The norm is considered to be the completion of skills within ± 15 days of the age being tested.

The disadvantage here, or rather the difference from the method we propose, is the limitation in the age aspect (up to 4 years), while the preschool age period, as a rule, ranges from 3 to 6–7 years and is key in the development of the child's psyche.

Results

As a result of a review of the literature, an alternative method for assessing the development of psycho-speech functions in dynamics was developed in the form of a table that serves to assess the level of development of mental functions in children under 6 years of age in dynamics, which consists in determining the level of development of mental functions by comparing the child's knowledge and skills and abilities with the criteria proposed in the table in three areas of development: speech, intellectual and communicative, for each of three age groups: from 0 to 2 years, from 2 to 4 years, from 4 to 6 years age, according to the results of which are divided into 5 levels: Level I – normal/age-appropriate, Level II – mild delay in psycho-speech development, Level III – moderate delay in psycho-speech development, Level IV – severe delay in psycho-speech development, Level V – gross delay in psycho-speech development, to determine the severity of violation of psycho-speech functions both in general and in dynamics.

The assessment, according to our proposed methodology, is carried out as follows. The doctor determines the full age of the child, and then finds the appropriate age period in the table (0-2 years, 2-4 years or 4-6 years). By examining the child and talking with the parent, he determines the degree of development of the child's speech, thinking, and communication skills according to the above criteria and compares them with those from the table. Based on which level (from I to V) of a given age period, according to the criteria of speech development, thinking and communicative development, the predominant number of child indicators fit, a conclusion is drawn to which level (degree of severity) the development of certain functions of the child belongs.

More than 60 children with varying degrees of severity of psycho-speech deficit were examined. Let's give an example of some of them.

Example 1.

Child, 3 years old. The mother complained about the child's delay in speech development. An objective study and conversation revealed the following:

In terms of speech development: the child speaks, his vocabulary is about 30 words, does not combine words into phrases, uses one word as a sentence; does not know the names of figures, colors, does not tell a story based on the picture, only says his name (IV level). In terms of development of thinking: does not distinguish right from left, counts only up to 3, does not know directions of movement and profession (IV level). In terms of communicative development: the child shows greeting gestures upon request, understands the difference between “you can” and “you can't”, fulfills simple requests from adults like “give”, “take”, listens to the beginning of a fairy tale, but then quickly stops, plays in any toys, especially bright ones; reluctant to interact with peers, more often attached to parents (level IV–III).

A diagnosis was made: Delayed psycho-speech development. Level IV.

After a course of treatment and psychological and pedagogical intervention, the child's vocabulary approached 100, he began to combine 2 words into a sentence, name colors, his name and age, and answer questions based on a picture (speech - level III). In addition, he began to distinguish right from left, count to 5, names directions of movement, such as up and down, recognizes 1-2 representatives of professions (thinking - level III). According to the communicative branch of development: the child began to show gestures of greeting and farewell at will, a gesture of gratitude upon request; the child himself knows what is allowed and what is not, and acts based on these rules; fulfills more specific verbal requests; listens to a fairy tale to the end if it is told with bright intonation; plays with certain toys and uses them for their intended

purpose; begins to interact more often in games with children, repeats their manners (communication - level II).

Diagnosis: Delayed psycho-speech development. Positive dynamics. Level III.

In this way, it is possible to determine the severity of the initial state of delayed development of psycho-speech functions, as well as its change in one direction or another over time.

Example 2.

The boy is 5 years old. According to complaints from the mother, and conversations with the child himself, during the initial examination the following was revealed:

Speech: The child's vocabulary ranges from 100 to 300 words, the child connects up to three words into one sentence, uses nouns and simple verbs in his speech, does not know an adverb, counts to ten, names figures, animals, fruits and vegetables, toys; knows the signs of size and color; names only the name and age upon request, names only brothers/sisters from close relatives, cannot tell a story from a picture himself, but answers questions correctly, answers only the questions "What?", "Who?".

According to the above, the development of a child's speech corresponds to a greater extent to level IV.

Thinking: Distinguishes right from left with difficulty, remembers when prompted, does not know opposite values, counts to ten and back, knows the numerical difference between greater and less, but does not know how to equalize, finds it difficult to generalize several objects into one group, does not know how to compare them, does not remove unnecessary things from the picture, draws scribbles without putting meaning into them; knows only one figure, one or two colors, professions, but does not know the seasons, days; cannot retell any stories by ear, cannot learn and recite a poem; does not know the directions of movements; has no idea about traffic rules.

According to the above, the development of a child's thinking corresponds to a greater extent to level IV.

Communication: The child rejoices when seeing familiar faces, but is wary of strangers; responds when called by name; understands when he is told "yes, you can" and "no, you can't", listens; shows greeting and farewell gestures that an adult asks (orally) to show; fulfills complex requests only if shown with a gesture; the child plays with any toys without any special preferences; when something bothers him, he whines, is capricious, turns to mom/dad; Do the child's mood and behavior depend on the psycho-emotional situation in the family; prefers to play alone; listens to a fairy tale for a short time, gets distracted quickly; focuses on adults' assessment of his activities; tries to attract the attention of an adult; does not contact anyone, behaves aloof, but shows dependence on adults; understands the roles of mother and father only at home; distinguishes adults by only one characteristic (profession); asks a large number of questions about everything, communication is aimed at knowledge.

According to the above, the indicators of the child's communicative development meet the criteria specified in levels III and IV. In this case, level IV-III can be taken as the average value.

After a two-week course of pedagogical and speech therapy classes, both individual and group, a re-diagnosis of psycho-speech functions was carried out, with the help of which the following data were revealed.

Speech: began to name signs of shape (round, square), taste (sweet, bitter); states his first name, last name, age, names of close relatives; began to answer the questions "Where?" "Where?".

Based on the results, we can say that some elements mentioned in level III have appeared, that is, we can already talk about a shift in the level of speech development to IV–III (a tendency towards progress).

Thinking: began to distinguish right from left more confidently, learned to compare and contrast objects only by size and color, finds it difficult to remove unnecessary things in the picture; recognizes two figures, can talk about what he saw, partially recites a poem, knows the directions up and down; began to recognize the colors of traffic lights, although it is difficult to answer questions.

According to the above, the child is showing more and more signs that meet the criteria of level III, but a complete shift has not occurred. Taking into account the trend towards progress, level IV-III is taken as the average value.

Communication: The child began to play with certain toys, but does not become attached to them; listens to fairy tales accompanied by musical effects and animal sounds; feels sincere remorse, tries to “apologize” when he does something wrong, began to communicate more actively with his close relatives; began to distinguish adults on more than one basis.

Progress in the child's behavior indicates a shift in communication development to Level III.

In this study, 2 weeks passed from the initial examination to the second examination, which is a short period of time for an adequate assessment of changes in the functional state of children with psychospeech disorders. However, in all three areas of development, the child showed a tendency to increase the level (decrease in the severity of the delay in psycho-speech development). It is recommended to repeat this study after some time (from 1 to 3 months) to monitor the stability of new skills and further progress in development.

So, the use of the method we have developed for determining the severity of delay in psycho-speech functions is quite convenient and accessible. It is advisable to use the proposed assessment criteria also in rehabilitation institutions for the rapid assessment of the child's functional state in order to timely carry out psychological and pedagogical correction, as well as to assess its effectiveness. It can also be used in conjunction with the GMFCS (Gross Motor Function Classification System) scale.

Conclusion

For a comprehensive developmental assessment: The Bayley Scales and DDST offer the broadest coverage of various developmental dimensions.

For specialized speech assessments: The Speech and Language Development Scale, CSBS, CDI and Selchen's Scale are suitable for detailed analysis of speech and language skills.

For early diagnosis: CSBS and CDI focus on early ages and early signs of language development.

For use in clinical practice: Bayley Scales and MFDD provide in-depth analysis suitable for diagnosis and treatment planning.

Using our proposed method for assessing psycho-speech development, it is expected to determine the severity of the initial state of delayed development of psycho-speech functions, as well as its change in one direction or another over time.

Application of the method will make it possible to instantly identify the state of psycho-speech functions, differentiate between normal and pathological development of thinking, speech and communication abilities and, at the same time, predict the child's rehabilitation potential.

It is advisable to use the proposed assessment criteria also in rehabilitation institutions for the rapid assessment of the child's functional state in order to timely carry out psychological and pedagogical correction, as well as to assess its effectiveness. It can also be used in conjunction with the GMFCS (Gross Motor Function Classification System) scale.

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