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## **Diagnostics of the development of early children: criteria and tools**

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### **ABSTRACT**

The article outlines the problem of diagnosing the development of young children is not new, but it is still not sufficiently developed. Since everything that has been developed in psychology in this direction does little to meet the needs of both science and practice. Qualitative data analysis became the essence of a psychological experiment, in which, relying on data on the patterns of development and the characteristics of a pathologically altered psyche, various types of real mental activity were modeled, the experimenter's creative participation, flexibility of his strategy and tactics in the application of various methods and techniques in the research process was envisaged. So, in order to determine the current psychological state, it is recommended to write not a diagnosis or a conclusion, but a "psychological profile of a person".

**Keywords:** Toolkit, learning, perception, early age, networking, psychological profile

### **INTRODUCTION**

The problem of diagnosing the development of young children is not new, but it is still not sufficiently developed. Since everything that has been developed in psychology in this direction does little to meet the needs of both science and practice.

The first special methods for the study of mental development were developed at the end of the last century in the form of tests that approved the psychometric approach to assessing the development of an early child. However, the scientists did not take into account that the exact psychometric procedure does not allow taking into account: 1. The variability of the child's psyche in a given period (a combination of physical, mental and family indicators). The study of individual indicators is possible, but only to identify primary disorders. It is necessary to establish the exact ratio of all the above indicators taking into account the time of appearance, meteorosensitivity (weather conditions), place of residence (permanent residence, according to which it is necessary to take into account the terrain, air humidity), the climate of the immediate environment, the number of separations from parents, visiting relatives with different living conditions, the number of changes in activities, the number of walks in the fresh air, etc. As a result, the presence of low conductivity in the cortical junctions of the brain may be associated with a slowdown in the physical growth of the child due to eating natural products or, on the contrary, with sub-products, as a result of which the structure of the child's body may change (for example increase or decrease in the volume of the skull), which is not a pathology. We are talking, perhaps, about compensation, which can lead to the appearance of irritability in a cramped room and joyful excitement in the street in the same child, to the manifestation of a high level of perception in the process of communicating with parents and at the same time to a low level of memorization and perception in communication with someone else's adult (for example, a specialist in an institution). As a result, one-stage test procedures are not very informative and can harm the child's psyche. since repeated carrying out of similar tests in the form of correctional sessions with the same specialist, without clarifying the multifactors, will not lead to a result.

For selection purposes, tests were first used by the psychologist Alfred Binet in 1905, who, together with psychiatrist Thomas Simon, on behalf of the French Ministry of Education, created the measuring scale of the mind. For this, through numerous empirical tests, a set of tasks was selected that made it possible to identify the child's general intellectual potential. In the selection of problems, Binet was guided by the provision that there should be a lot of tests. This position was based on the understanding of intelligence as an undifferentiated bundle of tendencies, in the center of which lies the ability to think, since this ability is manifested to one degree or another in all acts of thinking [3].

This approach is based on the prevailing methodological concept of the genetic determination of the child's mental abilities, which actually ignored such powerful developmental factors as living conditions, education and upbringing. It can be assumed. that this method was widespread and as a result, families were resettled according to the level of intellectual development: families of scientists, inventors appeared in different countries, in Russia, due to the outflow of citizens with a high level of intelligence, the level of production and

cultural life fell sharply. Such stratification, perhaps, it was necessary to legislate and establish boundaries, so in 1917 there was a revolution. According to one version, the 1917 revolution led to the emergence of independent states in modern Europe with the establishment of borders.

The main diagnostic indicator of the psychometric method of examination is the "mental level", the intellectual coefficient, which is considered in psychology as a relatively stable value throughout life, which serves as the main criterion for selecting children in various types of educational institutions. Life tasks are diverse, require the connection of various cognitive and other processes, different properties of mental activity, therefore it is impossible to quantify and rather average the intelligence index. For example, when perceiving pictures (experts in the field of painting), a sufficiently high level of perception, and there may be a low level of thinking, but they can be outstanding experts in this direction, tasters have a high level of tactile perception and at the same time have a low level of development of long-term memory (for example, do not remember the date of the beginning and end of the world war), but be the best specialists in their field. It is necessary to move away from the average values of intelligence and move on to determining the individual abilities of a person, features of a creative nature (career guidance) and imagination (as the basis of thinking).

At the beginning of the 20th century, the psychometric method became widespread, tests found their practical application not only in Europe, but also in America and Russia [9].

The testometric approach was not the only way to diagnose early childhood development. Along with the Binet tests, other diagnostic systems were developed to assess developmental disorders.

In particular, in Italy, P. Pizzoli developed methods for a detailed study of the sensory sphere and the state of motor skills in young children. And in Germany, Ziegen's program for identifying mental retardation appeared, which included tasks for assessing memory, defining concepts, understanding judgments, solving arithmetic problems.

In America, N. Norsu-Orty, H. Goddard developed an integrated approach to the study of the mental development of children, which included an assessment of various parameters: growth, lung volume, some motor skills, coordination, memory, features of associative and other processes, although the criteria for these assessments were uncertain.

In 1910, a work by the German scientist W. Weigandt appeared, which outlined a system for studying the development of young children, based on the observation of all types of mental activity, in conditions close to natural. The methods of the child's action with toys, real objects, features of visual, auditory, tactile sensitivity, and speech were recorded.

A common feature of these programs for the study of children was the lack of clear assessments for distinguishing mental disability from normal mental development [21]. In practice, these research programs have not taken root.

A special place in the development of psychological diagnostics is occupied by the technique developed by the famous Russian psychiatrist G.I. Rossolimo [14] According to V.I. Lubovsky [8], this technique was much more progressive and has more capabilities than the Binet-Simon metric scale. G.I. Rossolimo analyzing the methods and composing his own, proceeded not from an empirical random selection of tasks, but from certain ideas about the structure of the psyche, in which he singled out three areas: mental tone, memory and higher processes. In each area, in turn, they distinguished (not always rightfully) separate mental processes. Each of them was offered 10 problems, the results of which were evaluated in points. The obtained indicators were noted on a special form-chart. This gave a broken line called the "psychological profile". In addition, standard indicators were developed for the subjects of different ages, which made it possible to establish deviations from the norm.

The purpose of such a study was not only to find a total quantitative indicator, but to reflect the level and correlation of development and state of mental processes. This was the first attempt at a qualitative and quantitative analysis of the structure of intelligence, although its very structure was presented very incompletely and one-sidedly. G.I. Rossolimo believed that the examination using this technique is only one of the diagnostic methods that complements the clinical examination. He attached great importance to anamnestic data and conversation with the child. He carried out the collection of anamnesis according to a detailed scheme, which contained about 200 items and was called the "Plan for the study of the child" [22].

Criticizing the diagnostic system of G.I. Rossolimo, L.S. Vygotsky considered it unacceptable to treat memory, attention, thinking, which are a kind of psychological functions, as being equivalent in the development of a child of an early age. In general, here it should be noted that the attention of young children is attracted by objects of different sizes and colors, the actions of different children with objects are diverse: perception is multidirectional, different types of perception and memory dominate, which suggests that at an early age it is difficult to distinguish between cognitive processes, their functions, their manifestation. For example, a child after yesterday's walk may not notice the absence of a slide on which he was riding, not because he has a low level of perception, but because in general the air, part of the world-playground has not changed, and for him such a globality of perception will be a manifestation of memory ...

Methodology "Psychological profile" G.I. Rossolimo was quite cumbersome, its use took a lot of time, but from the point of view of obtaining indicators of the functioning of mental processes, it was certainly much more complete and effective in comparison with the tests of A. Binet. However, this technique was not widely used. Obviously, the international authority of the Binet tests, which filled all countries of the world, played a role here. These tests are simple in content and easy to process the data obtained. They were repeatedly modified and improved, and also became the source material for other tests [14].

The most famous after the Binet tests was the D. Wechsler scale. In these tests, the selection of problems was also empirical. But, unlike the Binet system, the data in them are not given in a chronological sequence by age, but functionally divided into two groups (verbal and non-verbal), each of which contains a series of tasks. In general, the tasks in Wechsler's tests are much more varied. Each type of problem has variants arranged in order of age difficulty.

Wechsler's tests [24] make it possible to determine the intelligence quotient and the giftedness quotient. According to this system, not only the total intellectual indicator is calculated, but also individual total indicators for verbal subtests and action subtests. This allows us to give a deeper qualitative description of the level of development of the examined child, but, as in Binet's tests, Wechsler's system is purely phenomenological and does not go beyond the concept of development as changes of a quantitative nature.

According to K.M. Gurevich [16], the methodological development of the Wechsler scale is perfect. However, the results of its implementation, like all other psychological tests, depend, first of all, on the cultural and educational level of the researched. A deep analysis of the content side of the information obtained with the help of tests has led many authors to understand that tests (including Wechsler's tests) do not measure intelligence, but the amount of knowledge acquired by an individual in a particular sociocultural group.

The question of the legality of using the psychometric system to solve the problems of diagnostics of development, both in our country and abroad, is debatable.

In this regard, R.B. Kettell proposes, along with intelligence, to consider the personal and motivational characteristics of individuals.

In this regard, the study of A. Wallon [12] is of interest, who rightly attached great importance to the development of the personality of a child of early age, which he considered as a holistic education, integrated in the course of development of cognitive and affective processes. Based on the identification of certain stages of development, which largely reflect the characteristics of affective, emotional formations, he based his diagnosis not on comparing the mathematical characteristics of an intellectual defect with a certain level of mental development, but focused on the degree of integration and coordination of functional systems.

R.Zazzo [23] in his study, based on the idea of heterochrony in the rate of development of mental functions, received the corresponding types of profiles, which are determined by the nature and degree of difference between different aspects of development. The means of establishing these differences were tests, but the interpretation of the results was already based on a qualitative analysis of the testing process (assessment of the dynamics of cognitive activity, changes in the affective state of the subject during the experiment, attitude to the task, types of errors, etc.).

A. Anastasi [2] and other psychologists propose to supplement the test results with biographical information, observation of behavior, and even put forward the requirement to take into account the conditions of the child's development.

In America, E. Heisserman developed a method of "pedagogical assessment" or "structural study of the child" for diagnosing development, a feature of which is a qualitative analysis of the process of performing a test-task, and not an analysis of its result. The content of the method is a series of tests, each of which does not go beyond the limits of a natural psychological and pedagogical experiment.

The criteria for assessing a child's actions developed by the author make it possible not only to ascertain the quality of the test, but also to determine the structural analysis of defects in mental activity [17].

The method of pedagogical assessment is a significant contribution to the development of psychodiagnostics. At the same time, it should be noted that its use takes a long time, and therefore its use in a single study of a child is impossible.

In the twenties, research and practical work in the field of testing began in the country. Many psychologists were engaged in such developments: P.P. Blonsky, A.N. Bernstein, L.A. Quint, A.P. Nechaev, A.M. Schubert. Their efforts were directed both to the development of new tests and to the verification and adaptation of the Binet-Simon tests, the improvement of G.I. Rossolimo.

Binet-Simon tests, translated by A.M. Schubert and other tests, including those developed by domestic authors. Simultaneously with the intensive introduction of tests in pedagogical practice, a critical attitude to them grew. Soviet psychologists expressed serious warnings about their use, noted the unequal level of understanding of test tasks by children from different countries, the heterogeneity and unevenness of tasks in the sets, emphasized that test tests are a control and auxiliary means of pedagogical accounting and should be used with extreme caution. Some scientists have turned out to be categorical opponents of tests in general. In their opinion, the test results are able to characterize only elementary mental processes [19].

Tests often became a working tool in the hands of unskilled people who did not have sufficient knowledge about psychology and about the developmental characteristics of young children.

Psychology, which in these years began to develop so intensively, was subjected to serious criticism, its development as a science was blocked, research in the field of diagnostics of mental development was stopped for a long time.

Tests have proven to be a convenient measurement tool. However, the inner essence of testing, that is, the theoretical substantiation of the phenomena of mental activity, which is the subject of psychodiagnostics, remains uncertain and is not as perfect as its form. In most tests, the development of a child is determined in quantitative units (developmental coefficient, developmental index, global age indicator), in some, the judgment about development is determined in the qualitative characteristics of compliance or non-compliance with the norm.

An integrated approach has replaced the testometric one. The basic principles of this approach have also been developed. It was focused on obtaining a complex of versatile data about the child during the diagnostic examination. It was assumed that psychological diagnostics should become one of the components of an integrated approach, and its results should be considered and be significant only in conjunction with other data. An integrated approach requires a comprehensive study and assessment of the characteristics of a child's development, covers not only intellectual and cognitive activity, but also behavior, emotions, the level of mastering skills, as well as the state of vision, hearing, motor sphere, neurological status, developmental history [18].

Qualitative data analysis became the essence of a psychological experiment, in which, relying on data on the patterns of development and the characteristics of a pathologically altered psyche, various types of real mental activity were modeled, the experimenter's creative participation, flexibility of his strategy and tactics in the application of various methods and techniques in the research process was envisaged. According to O.L. Rubinstein, a qualitative analysis of the results of the application of diagnostic techniques is put forward as opposing a purely quantitative approach in assessing mental data inherent in classical testing.

So, in order to determine the current psychological state, it is recommended to write not a diagnosis or a conclusion, but a "psychological profile of a person". In a narrow methodological (operational) sense, PPL is understood as a diagnostic factor profile - a graph (histogram) of the severity of various factors, measured using different methods in one person. The ratio of "peaks" (rises) and "troughs" (dips) on this graph clearly displays the ratio of various psychological properties and thereby describes the structure of abilities, motives (interests), qualities of a person's character. In a broad and somewhat metaphorical sense, PPL means the ratio of not measured, but "implied" (hypothetical) human properties. (<https://ht-lab.ru/knowledge/dictionaries/gipertekstovyy/3156/>). At different ages, the profile is determined by the immediate needs of a person (during the neonatal period, a psychologist or pediatrician determines the properties of the nervous system that allow the child's primary needs (biological and social) to be fully satisfied; at an early age (psychologist), such personal prerequisites as the characteristics of communication are determined ( examples of moral behavior on the part of adults), features of activity, features of cognitive processes; in preschool (psychologist) - the features of solving problems of varying degrees of complexity, moral development, features of communication are determined.

The systematic nature of the study has become the leading methodological principle of modern psychology in general and medical psychology in particular.

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