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### PSYCHO-PEDAGOGICAL DIAGNOSTICS OF DEVELOPMENTAL DISORDERS OF INFANTS

**Abstract.** The article presents a retrospective analytical review of domestic diagnostic techniques of psycho-pedagogical observation of infants with developmental disorders. The authors show the evolution of scientific interpretations of the key indicators and the lines of psychological development of infants. The article also describes the requirements to the process of working out psycho-pedagogical tools for identification of deviations from the normal development of infants in the context of designing the system of early complex support at the present stage of development of the science. The authors single out and characterize the basic parameters demonstrating the level of development of communication and object-oriented activity of infants.

On the basis of analysis of theoretical sources and practical experience, the authors come to the conclusion about the urgency in psycho-pedagogical diagnostics of studying and defining the degree of formation of the basic lines of infant's development: social, physical, and cognitive – and the degree of development of the leading and typical kinds of activity characteristic of each particular age. The authors specify that pedagogical diagnostics functions as the initial stage in the system of remedial pedagogical influence, being its stepping stone.

**Keywords:** diagnostics, intellectual development, infancy, age-based approach, level of development, complex study, lines of development.

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First diagnostic procedures were worked out in our domestic science in the 1920s – 1930s and were aimed at diagnosing the development of infants. Psychological aspects of development were interpreted from the positions of the reflexological approach as the reflection of certain stages of development of the nervous system. N. M. Shchelovanov was the first to

formulate the principle according to which the level of development of the functional structures of the brain presupposes the emergence of certain responses, and the fact of their appearance is conditioned by the corresponding educational work.

“A Short Diagnostic Scheme of Development of an Infant” by I. L. Figurin & M. P. Denisova (1926)

was one of the first books devoted to the diagnostics of infant development. N. M. Shchelovanov worked out “Indicators of Neuro-psychological Development of Infants during the First Year of their Lives”. The manual contained the criteria for assessment of the level of psychological development of infants at the ages from 2 to 13 months. The given complex of normative criteria was further developed by N. S. Aksarina [1]. The age range was extended up to three years. Later on, the “Manual for Use at Child Care Centers and Nurseries” (based on the works by N. M. Shchelovanov, M. Yu. Kistyakovskaya, E. L. Frukht, G. V. Gridneva, et al.) was created at the Department of Physiology and Education of Children of the Central Institute for Advanced Medical Training. These methods were worked out through accumulating data stating the correspondence between the child’s responses and the age of their emergence on the basis of which assumptions were made about the child’s peculiarities of psychological development in terms of correspondence or non-correspondence to the developmental norms. The researchers defined the norms of neuro-psychological development of children at different ages, the main principles of control of psycho-physical development, and worked out the method of diagnostics of physical and psychological development of children, the content, methods and techniques of pedagogical support of children during the first years of life.

Similar principles were used for the foundation of diagnostics of neuro-

psychological development of children of the second and third years of life worked out by K. L. Pechora, G. V. Pantyukhina and L. G. Golubeva [7]. The following lines of development are assessed while defining the level of neuro-psychological development of a child: speech comprehension and active speech; sensory development; development of play activity and object-oriented actions; development of general movements; development of independent activity habits and (in the third year of life) formation of artistic and constructive activity.

The authors worked out the indicators of these lines of development per month during the first year of life, quarterly during the second year of life, and half-yearly during the third year of life.

The list of indicators represents a set of formalized requirements to the child’s skills and habits at each developmental micro-period. For example, at the age of 1 year and 1 month a child should differentiate objects differing from each other by three centimeters. At the ages from 1 year 7 months to 1 year 9 months he must be able to differentiate objects of three contrasting sizes, and at the age of 2.5 years he should demonstrate the ability to choose objects of 4 basic colors according to the model. In diagnosing playing and comprehension, children should demonstrate playing skills in accordance with the instruction of an adult (*feed the doll, put the doll in the bed, etc.*).

According to the level of development children are subdivided into four main groups:

Group 1 – typical development

when all indicators correspond to the child's real age;

Group 2 – primary developmental delay of one epicrisis;

Group 3 – medium developmental delay of two epicrisis;

Group 4 – significant developmental delay of three epicrisis.

The results of assessment of the level of development and behavior are entered into individual cards of psychological development compiled on the basis of "Indicators of Neuropsychological Development of Children of the Second and Third Year of their Lives".

The given diagnostic method is widely used in children's institutions in our country. It is rather convenient for application both by psychologists and pedagogues, represents a variant of a testological diagnostic model, is based on rich empirical material, and comprises standardized procedures of evaluation of knowledge, skills and habits in various fields of the child's development.

At the same time such partial approach can hardly give a chance to realize comprehensive personal development of a child and reveal peculiarities of the sphere of his motivation, interaction with the surrounding people and other personal properties.

Diagnostics of integral forms of psychological activity in which the child's personality is realized and developed needs a basically different approach to working out of both indicators of psychological development and the diagnostic procedure itself. The solution of this task needs an adequate theoretical position which

would allow, first of all, to represent the psychological development of the child as a process with its own logic and regularities, irreducible to its prerequisites and conditions (such as, for example, maturity of the functional structures of the CNS); secondly, it should provide a possibility to define the child's performance in the most significant for psychological development kinds of activity as an object of diagnostics in each age group.

At the present moment, designing psycho-pedagogical tools for detection of developmental deviations in children becomes especially urgent in the context of creation of the system of early complex assistance. Let us consider the existing theoretical and practical achievements in this area.

- "Early Diagnostics of Intellectual Development" by E. A. Strebeleva (1994) is a variant of early child diagnostics designed with regard to regularities of their psychological development. This diagnostics was created for detection of intellectual disabilities of children at an early age and design of rehabilitation techniques. The author proceeds from the theoretical assumptions of the cultural-historical conception about the leading activity and the zone of proximal development. This approach is based on the idea that object-oriented activity is the leading kind of activity at an early age, and joint activity with adults is the basic method of social experience acquisition.

The diagnostic method of E. A. Strebeleva comprises a series of ten procedures aimed at diagnosing the level of intellectual development

of children between the ages of 2 and 3. The main parameters include the following:

- task acceptance: readiness of the child to perform the task irrespective of the quality of result;

- methods of task completion: independent completion – adult-assisted completion (if the child cannot perform it himself) – completion after special training;

- trainability in the process of diagnostic observation (kind of assistance – direct demonstration and joint activity; demonstration by means of gestures; imitation with the help of verbal instruction);

- the child's attitude to his activity results. Interest in one's own activity and the final result is typical of young children. Indifference to them is characteristic of children with intellectual disabilities.

All procedures are non-verbal and may be used for testing children with any level of speech development. The tasks are given in accordance with the principle of gradually increasing level of complexity, like moving objects in space, correlation of objects by form, size, and color. The child is asked to catch a ball, assemble and take to parts a stacking toy, put the bits together to make a picture, build a house on the model given by an adult, draw a path or a little house, etc. Each task is evaluated on a four-point scale. Evaluation takes into consideration the zone of proximal development: any task is first meant to be solved by the child himself, but if he has any difficulties it can be solved together with the adult.

The adult person teaches the baby to perform a certain action and then checks if the child can reproduce the adult's model.

The given method is a more reliable tool for determining the level of psychological development, including the intellectual one in comparison with revealing the actual state of any of its spheres. Delimitation of the zone of proximal development enables the psychologist to outline concrete ways of remedial work with the child and find out the most vulnerable areas in his intellectual development. But the scope of application of the given method is limited: it embraces only one sphere – the sphere of intellectual development, and a very narrow age range: the third year of life only.

E. A. Strebeleva [5; 11] worked out and broadly tested the developmental approach to diagnosing deviations in psychological development of children at an early age and preschool children taking into account psychological innovations and level of development of the leading and typical kinds of the child's activity at each stage of development. Such approach does not only allow the examiner to reveal deviations in the child's psychological development, but also helps define the ways of early psycho-pedagogical support. The authored psychological method of E. A. Strebeleva has been experimentally tested and is widely used by specialists in many regions of the Russian Federation.

- The manual "Diagnostics of Psychological Development of Children from Birth through Age Three" by E. O. Smirnova, L. N. Galiguzova,

T. V. Ermolova, S. Yu. Meshcheryakova [3] refers to diagnostic works written on the basis of the cultural-historic conception of psychological development worked out by L. S. Vygotskiy. The manual attempts at realization of an integral person-oriented approach to evaluation of a child's psychological development from the positions of the theory of the leading activity by A. N. Leont'ev, periodization of psychological development by D. B. El'konin, and the conception of the genesis of children's communication with adults by M. I. Lisina. In the frame of this approach, the level of development of communication and the leading activity reflects the most important characteristic features of the general psychological development of a child and serves as an adequate object of psychological diagnostics. In accordance with principles put forward in the manual the procedures are aimed at diagnostics of the levels of development of the early form of adult-child communication – business communication in situations – and object-oriented activity as the leading one at this stage.

The main parameters characterizing the communication level of development are the following:

- level of initiative in communication as an indicator of the child's willingness to communicate;
- level of sensitivity to the partner's actions as readiness to accept the initiative of another person, respond to it and adjust his behavior in accordance with the adult's actions;
- level of mastery of the means of communication – speech and con-

crete actions with the help of which the child communicates.

The first two parameters characterize the communicative aspect of needs and motivation; the third one concerns its operational constituent.

The singled out parameters are evaluated with the help of corresponding indicators.

The basic parameters of the level of development of object-oriented activity include the following:

- operational aspect of object-oriented activity characterized by various actions with objects;
- needs and motivation aspect of object-oriented activity – the level of cognitive activity of a child. Indicators of cognitive activity include the child's interest in objects, willingness to study and perform actions with them, persistence and emotional involvement in the activity;
- inclusion of object-oriented activity in communication with adults. The degree of acceptance of the adult's support and the possibility of the adult's influence upon the independent actions of the child serve as most important indicators of the child's potential capabilities.

During the third year of life the pedagogue may diagnose the level of development of a separate branch of object-oriented activity – processual playing which is the basis of development of the leading activity at the next stage of development – of plotted role-playing. The main parameters of processual playing are the following:

- operational aspect of playing
- the character of playing actions;
- needs and motivation aspect

of playing – playing initiative, amount of time spent in playing, emotional state of the child during playing;

– imagination as an ability to use symbolic substitutions during playing;

– acceptance of the adult's playing initiative by the child.

Inclusion of diagnostic situations in the real life context of the child – his free individual activity and joint activity with the adult – is a characteristic feature of diagnostic situations worked out in the given manual.

Assessment of diagnostic results is undertaken on the basis of a complex qualitative analysis of the child's behavior which allows the experimenter the real level of his psychological development, timely diagnose delays and deviations and define the zone of his proximal development.

• The method of pedagogical observation of hearing of children during the first year of life which allows early diagnosing hearing disorders was worked out by T. V. Pelymskaya, N. D. Shmatko [4].

• L. I. Fil'chikova, M. E. Bernadskaya, O. V. Paramey [13] described the methods of psychopedagogical diagnostics of visual impairments in infants, as well as the peculiarities of eye diseases in children during the first years of life.

• E. F. Arkhipova [2] suggested a variant of observation of pre-speech development of children with cerebral palsy.

• O. G. Prikhod'ko [8; 9] worked out and tested diagnostic tools of a complex medico-psychopedagogical study of peculiarities of the basic lines of development (motor,

cognitive, speech and social) of children with cerebral palsy from ages 1 to 3. The authored step-by-step diagnostic program allows diagnosing the real level and potential capabilities of children, as well as polymorphic character of manifestations of functional systems disorders in children with CP, and creating variable individual programs in the process of complex longitudinal observation.

• Yu. A. Lisichkina [6] modified and tested the diagnostic method of O. V. Bazhenova for investigation of pre-verbal development of children with *perinatal encephalopathy*.

• Yu. A. Razenkova [12] presented variants of logopedic observation of children during the second-third years of life left without parental care.

• E. A. Ekzhanova, E. A. Strebeleva made an attempt to separate the notions of psychopedagogical and pedagogical observation for use in pedagogical practice. It is important to separate these notions because they are backed by two approaches to child observation, having different aims, tasks and requirements to the used instruments. Differential diagnostics uses the *psychopedagogical* approach in the work of psycho-medico-pedagogical commission specialists, councils of physicians, and for staffing educational institutions due to the significance of the techniques of differentiation and evaluation of individual psychological properties of a person. The object of psychopedagogical diagnostics of deviant variants of cognitive development consists in the process of studying the psychological develop-

ment of children with developmental disorders or deviations. *Pedagogical diagnostics* primarily concentrates on observation and detection of the level of formation of the basic lines of development of a child (social, physical and cognitive), as well as the degree of development of the leading and typical kinds of activity characteristic of each particular age. The authors stress that pedagogical diagnostics serves as initial stage in the system of remedial pedagogical process, being, in fact, its starting point. Based on analysis of results obtained in the course of pedagogical observation, the pedagogue-defectologist works out an individual remedial program which is part and parcel of the individual educational path of each child (E. A. Ekzhanova, E. A. Strebeleva [5]).

• E. R. Baenskaya, M. M. Libling [10] suggested a method of diagnostics of impairments of interaction of a young child with the surrounding world and described the features of affective development distortion.

At present, science and practical work need special diagnostic instruments capable of revealing developmental disorders of integral forms of psychological activity which embody the development and formation of the child's personality beginning with the very first stages of his life, rather than analyze separate developmental functional disorders.

#### References

1. Aksarina, N. M. *Vospitanie detey rannego vozrasta* / N. M. Aksarina. — 3-e izd., ispr. i dop. — M. : Meditsina, 1977.
2. Arkhipova, E. F. *Rannyaya diagnostika i korrektsiya problem razvitiya. Per-vyy god zhizni* / E. F. Arkhipova. — M. : Mozaika-Sintez, 2012.
3. *Diagnostika psikhicheskogo razvitiya detey ot rozhdeniya do 3 let : metod. posobie dlya prakticheskikh psikhologov* / E. O. Smirnova, L. N. Galiguzova, T. V. Ermolova, S. Yu. Meshcheryakova. — SPb. : Detstvo-press, 2005.
4. *Diagnostika i korrektsiya narusheniy slukhovoy funktsii u detey pervogo goda zhizni* / sost. G. A. Tavartkiladze, N. D. Shmatko, T. V. Pelymskaya. — M. : Poligraf servis, 2001.
5. Ekzhanova, E. A. *Metodika pedagogicheskogo obsledovaniya detey mladshego doskol'nogo vozrasta s umstvennoy nedostatochnost'yu* / E. A. Ekzhanova, E. A. Strebeleva // *Defektologiya*. — 2007. — № 6.
6. Lisichkina, Yu. A. *Rannyaya diagnostika i korrektsiya nedostatkov doverbal'nogo razvitiya detey s perinatal'nym porazheniem tsentral'noy nervnoy sistemy* : avtoref. dis. ... kand. ped. nauk / Yu. A. Lisichkina. — M., 2004.
7. Pechora, K. L. *Deti rannego vozrasta v doskol'nykh uchrezhdeniyakh* : kn. dlya vospitatelya detskogo sada / K. L. Pechora, G. V. Pantyukhina, L. G. Golubeva. — M. : Prosveshchenie, 1986.
8. Prikhod'ko, O. G. *Rannyaya pomoshch' detyam s tserebral'nym paralichom v sisteme kompleksnoy reabilitatsii* / O. G. Prikhod'ko. — SPb. : Izd-vo RGPU im. A. I. Gertsena, 2008.
9. Prikhod'ko, O. G. *Sistema ranney kompleksnoy differentsirovannoy korrektsionno-razvivayushchey pomoshchi detyam s tserebral'nym paralichom* : dis. ... d-ra ped. nauk / O. G. Prikhod'ko. — M., 2009.
10. *Psikhologicheskaya pomoshch' pri rannikh narusheniyakh emotsional'nogo razvitiya* / sost. E. R. Baenskaya, M. M. Libling. — M. : Poligraf servis, 2001.
11. Strebeleva, E. A. *Pedagogicheskoe soprovozhdenie sem'i, vospityvayushchey rebenka rannego vozrasta s otkloneniyami*

v razvitiy : posobie dlya pedagoga-defektologa i roditeley / E. A. Strebeleva, G. V. Mishina. — M. : Paradigma, 2010.

12. Strebeleva, E. A. Psikhologo-pedagogicheskaya diagnostika detey rannego i doshkol'nogo vozrasta : metod. posobie / E. A. Strebeleva, G. A. Mishina, Yu. A. Razenkova ; pod red. E. A. Strebelevoy. —

M. : Prosveshchenie, 2004.

13. Fil'chikova, L. I. Narusheniya zreniya u detey rannego vozrasta. Diagnostika i korrektsiya : metod. posobie / L. I. Fil'chikova, M. E. Bernadskaya, O. V. Paramey. — M. : Poligraf servis, 2003.