Comparative theoretical approaches of developmental disorders to normal and disabled children

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Abstract:

Developmental disorders are a complex concept relevant to the multidisciplinary approach of children with special educational needs. The person with a developmental disorder is affected both by integrity - the complete somatic and psychological structure and functionality – and the ability to be a psycho-biological wholeness, the two aspects being in close interdependence. Developmental disorders are inherent in children with disabilities, but can also occur under the conditions of a normal intellect, for example, in the form of learning disabilities. In both situations, developmental disorders lead to increased learning and adapting to school requirements difficulties, imposing the implementation of a system of services appropriate to the individual needs of children with developmental disabilities that satisfactorily support the global integration effort.

Keywords: Developmental disorders, disability, special educational requirements, learning disabilities

Human development means the gradual formation of the individual as a personality, a complex process based on bio-morphological growth, psycho-functional maturation and socialization, in the plan of adaptation (Radu Gh.,1998, p. 34). By development, in general, is meant a complex process of transition from lower to superior, from simple to complex, from old to new, through a succession of stages, each stage representing a more or less rigid functional unit, with its own specific qualities. The transition from one stage to another implies both quantitative accumulations and qualitative leaps, which are in a reciprocal conditioning.

The notion of developmental disorder was defined for the first time in 1974 by Achenbach in the volume called Developmental Psychopathology and constitutes a complex concept because it represents the interface of two not by far simple processes, of mental development and maturation, on the one hand, and the one of constitution and a flawed evolution on the other.

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By means of developmental disorders, we understand all those deviations from the normal physical and mental development pathway that clearly and continually impinges upon the child's physical and social interactions with the environment.

Developmental disorders are associated with "a wide range of disorders characteristic of childhood and the structures of the existential environment" (DV Popovici, 2000, p. 59) Moreover, with regard to the causes that lead to developmental disorders, "it should be made a clear distinction between the intrinsic factors, which are related to the deficiencies of the subject in question and to the characteristics of the environment, including learning experiences "(Gh. Radu, 1999, p. 75).

Developmental disorders are inherent to any complex deficiency or disability, generating a stable unadaptability, ie, a disability state. However, the child is a developing being and can be confronted with imbalances that can lead to crises that can even lead to regress. On the other hand, the child is a developing human being, the symptoms observed at a given time may change or even disappear quickly. Therefore, we can talk about the disorder only when the child has a fairly stable symptomatology.

In the Manual of Diagnosis and Statistical of Mental Disorders (DSM 5) and International Classification of Diseases (ICD-10) in the developmental disorder category are described:

1. Intellectual disability - Mental functioning significantly below average (QI about 70 or less), starting before 18 years, and through concomitant deficits or deterioration in adaptive functioning (DSM 5)
2. Specific developmental disabilities related to school abilities (reading, writing, arithmetic abilities): dyslexia, dysgraphia, dyscalculia (ICD 10, DSM5)
3. Communication disorders - characterized by speech or language difficulties: specific speech articulation disorders, expressive or responsive language acquisition disorders, stuttering (DSM 5, ICD 10)
4. Pervasive developmental disorders - autism spectrum disorders: Infantile autism, Rett syndrome, childhood disintegration disorder, and Asperger syndrome (DSM 5, ICD 10)

5. Attention Deficit Hyperactivity Disorder (ADHD) - includes hyperactivity / attention deficit disorder characterized by notable hyperactivity-impulsivity symptoms (DSM 5)

Intellectual disability

Gheorghe Radu (2000) shows that "mental deficiency refers to the phenomenon of organic damage and/or functional impairment of the central nervous system, with negative consequences on the process of mental maturation, development in different aspects, to the individual concerned."

The American Association for Intellectual and Developmental Disabilities (AAIDD) defines it as such (2016): "Intellectual disability is characterized by a significant limitation of the ability to develop adaptive behavior of conceptual, social, and practical skills. Disability occurs from the age of fewer than 18 years."

The most common classification of mental deficiency is based on the measurement of the intelligence coefficient by tests, the coefficient of psychological development, the assessment of the possibilities of adaptation and integration, the elaboration of the communicative behaviors and the relation with the others.

Characteristics:

- are deficient in analysis and synthesis
- have slow thinking, with a barrier of thinking or lapses, even moments of mental void
- narrowing of the perceptual field, difficult orientation in space, reduced intuitive capacities to establish the relationship between objects, thinking is not creative but reproductive
- Children have difficulty in acquiring writing and reading and mathematical calculation
- Most of them have a motor hyperactivity, are unstable, shy, emotional, inhibited
- solve the imposed tasks only up to a certain level of complexity and abstraction
- they often face school failures that can be the basis of tense and contradictory feelings that generate behavioral disturbances

- they present a socio-emotional immaturity, difficulties in relation to others, constant functionality of unpredictable and unmotivated relationships

Language/communication disorders

They appear on the background of a normal level of intellectual development and are more common in the very young age students but in the absence of adequate therapy, they persist in the years to come. Language disorders are also present in children with some form of mental retardation and their severity and resistance to speech therapy are more pronounced.

The child with language deficiencies is characterized by the following clinical and psycho-pedagogical aspects (Gherguț, 2005):

- Fragility and instability - is due to factors that disturb the interpersonal relationships of subjects with speech disorders and those with the environment. It can manifest: fear in pronouncing words, isolation, rigidity, inertia in communication;
- Affective-emotional and volitional disorders - can go through prolonged depression;
- Psychomotor excitement - it can be manifested through permanent agitation that occurs depending on age, temperamental features, education and mental development of the person with language deficiencies;
- Internal conflicts - can negatively influence the formation of character and the natural development of psychic processes, especially when language deficiencies persist over time and become chronic;
- Abstaining from presenting ideas and thoughts, even when the subject with speech disorder has reached an advanced level of culture;
- Reducing social relationships - because of the difficulties encountered in communication and the understanding of the message from the interlocutor, especially if the language disorder occurs due to other deficiencies, social integration is very difficult either because of the lack of / poor understanding of verbal language, in the case of hearing deficiencies, or due to the compensating role of the word in the formation of representations, in the case of visual impairments.

Specific learning disorders/dyslexia

Concisely, dyslexia is defined by Emil Verza in the "Logopedia Treaty" as a "syndrome that encompasses all the difficulties child experiences in learning reading in conditions of independence from mental level."

Dyslexia is manifested by the paradoxical, more or less acute, theinability of the child to learn reading correctly. As a matter of fact, the subject fails to bind the grammar symbols, fails to link the sounds heard and the letters written, with constant and repeated confusion between acoustic resembling phonemes, their letters, and graphs. These children usually have a level of intelligence over 75-85; those with a coefficient below 70 are diagnosed as having mental retardation.

In the case of dyslexia we encounter the following typical errors (Verza, 2002):

- The group of reversal difficulties in the sequence of letters: deformations of words as a result of permutations or suppressions of letters, syllables (generally omitted or permutations consonants p, r, s); word deformations due to the suppression of the last letter; additions of letters or words.
- The group of difficulties characterized by omissions/substitutions: omissions of letters, graphic elements, final words syllables, letter substitutions, words or whole rows.
- The group of rapid error difficulties characterized by fragmentary reading, sometimes extremely slow, sometimes precipitated, with many hesitations in reading the words, with long breaks, meaningless reading, and the words are sometimes guessed, sometimes substituted, without logical justification, forgotten, repeated, skipped lines, repeated turns.
- Orthographical error group consisting of symptomatic errors, fake symbols according to transcribed sound, errors in rules, due to visual or auditory confusion, syllable inversions, omissions, superfluous letters additions, anticipation, perseverance, unstructured words in an ensemble.

Specific learning disorders /dysgraphia

Dysgraphia is defined as an inability or difficulty to learn writing by common pedagogical means, expressed either by substitutions, omissions, inversions of letters and syllables, word merges, or disruptions in drawing letters or analytical layout on the page, independent of the mental level or the school history. Dysgraphia is an incapacity of a child with normal language, hearing, mental development to learn correctly and to constantly use writing under normal schooling conditions (pedagogical method, didactic material, school props, etc.).

Dysgraphia is an important learning disorder by writing and is not attributable to mental retardation or sensory, neurological, emotional or economic, cultural or inadequate instruction.

The writing of these children consists of short sentences, poor in expression; the graphic productions of these children are marked by clutter and error, both in drawing letters and in grammatical, syntactic and morphological aspects.

The emergence of specific disorders in the development of graphic expression skills implies:

- Difficulties in visual-motor integration (the child can speak and read, but cannot perform the correct motor operations necessary to draw graphic symbols such as letters or figures)
- The child has difficulty in reviewing (he can read and recognize the words but cannot review the letters and write correctly after the dictation)
- There are shortcomings in the enunciation and syntax (it can copy the graphic symbols correctly but cannot organize them in a rich expression, with communication value)
- The development of the kinesthetic analyzer is delayed, and the child is unable to draw graphic symbols correctly; so it exceeds the line, writes times too high or too small, etc.

Specific learning disorders of mathematical calculus/dyscalculia

Like other learning disorders, this disorder is characterized by an impairment in the development and acquisition of schooling abilities, respectively the arithmetic calculus capacity, an impairment that is severe enough to be observed and become a disturbing factor in aschool activity.

This deficiency cannot be explained by a low level of intelligence, a lack of school education, a visual, auditory or other somatic or psychological disorder; also, in the case of these children, there can be no economic or cultural disadvantage that has led to dyscalculia.

These children present:

- The mathematical calculus capacity, measured by standard tests, is significantly lower in relation to the chronological age of the child, relative to intelligence and appropriate education.
- Difficulties in learning number names, writing them, understanding the concepts of combining and separating, using signs and working with them, have difficulties in understanding the concept of value, have difficulties in aligning the numerals, maintain their order, always make mistakes, have a certain pattern for error, have an inaccuracy of calculation, calculate with much weight in mind, have problems with graphical representation of information.
- They have difficulties performing basic arithmetic operations - adding and subtracting - memorizing numbers, tracking specific steps in counting, counting objects, multiplying, etc. Intentional symptoms include inconsistency in copying numbers, omitting calculation marks, decimals, or symbols when writing the answer. Often dyscalculia is associated with dysgraphia and dyslexia.

Pervasive developmental disorders

Pervasive developmental disorders represent a group of neuropsychiatric disorders characterized by anomalies and deviations in social development, communication, and cognitive development, with onset in the first 5 years of life. These disorders differ from other developmental disorders and specific behavioral features.

In the updated DSM-V version, autism subtypes (autism, Asperger's syndrome, and unspecified pervasive disorders) have been unified in a single diagnosis - Autism Spectrum Disorder.

Before the age of 3 years, there is development impairment in the following areas:

- the function of communicating the receptive or expressive language is affected, the development of social skills is affected by the inability to have emotional reciprocity or attachment
- the child cannot and does not know how to use facial and body messages in expressing emotionality; eye in the eye look, gestures and body posture
- the child cannot acquire the ability to relate to those of the same age, cannot express its interest, joy, share the toys
- socio-emotional reciprocity is poor, the child having bizarre or deviant answers, emotional modulations are inadequate to the context, and integration into the social context is through inappropriate and chaotic communication
- stereotyped and repetitive motor behavior, with hand waving, rotating and moving the whole body, preoccupations with thestereotyped game with parts of objects or with non-functional objects; smells, touches with tongue or listens to the sound of objects

Difficulties people with autism have at the level of social interactions with others are the central problem of this disorder (the main symptom) and also the main diagnostic criterion. Studies show that this deficit is permanent and is encountered irrespective of the person's intellectual level.

Attention Deficit Hyperkinetic Disorder (ADHD)

Attention Deficit Hyperkinetic Syndrome (ADHD) is a child's behavioral disorder, which is manifested by attention deficit and difficulty in carrying out a task.

ADHD is characterized by the early onset, before the age of 7, of a combination of hyperactivity, disorderly behavior and lack of attention:

- the child's inability to maintain his attention, which is easily disrupted by the surrounding stimuli;
- hyperactivity, leading to inappropriate behavior;
- impulse (affecting brain areas of inhibition) that causes the child to engage in various, even very risky activities, without being able to assess the severity of the risks.

The hyperactive child has a low concentration of attention capacity, difficulty in controlling attention, manifested by behavioral and cognitive impulsivity such as unease

and impatience. These children have no patience, they do not sit still, and they have difficulties in dealing with others. These peculiarities make them always disagree with adults and not be accepted by those of the same age. They have school difficulties due to lack of attention, disorganization of behavior and impulsive style.

Primary and derivate disturbances into developmental process

Due to their anatomic physiological nature, the primary affections are much more resistant to the therapeutic-compensatory intervention and are treated, especially, by medical means. Instead, derived (secondary or tertiary) diseases are less stable, can be corrected, compensated, or even prevented by appropriate psycho-pedagogical measures, particularly through a compensatory learning process initiated in the appropriate time interval.

It is known that specific developmental disorders occur at different levels of the personality structure, any deficiency - named after the level at which the primary defect is present - presenting a certain constellation of derived, more or less pronounced disturbances.

In deaf and children with hearing impairment, primary affection is at the level of the hearing analyzer, which also creates difficulty in adapting because hearing is the basis of oral speech, contributing, alongside view, to orientation in the environment, to controlling the manual activity, etc. Total suppression or partial impairment of the auditory function determines, as a major developmental disturbance, the inability to spontaneously structure verbal language and engage in the ordinary process of communication. The deaf child becomes also dumb. Unserved early in the process of specific therapy, deafness will still lead to a number of delays in the development process, especially in terms of higher cognition - children with hearing deficiencies are often characterized by excessive situational conjecture - but also in terms of emotional relationships, behavior in ordinary collectivity, etc.

Consequences of developmental disruptions in the process of school integration

By synthesizing the above in relation to developmental disorders in children, we can say that these disorders are present:

a) In children with deficiencies - seeing, hearing, mental, physical, etc., in which the developmental disturbances overlap with the organic ones (primaries), especially in the early ontogenesis and in their own way to each deficiency;

b) In some children with normal potential (ie without deficiencies), but developing in poor living and education conditions. In these, developmental disturbances hinder and distort evolution, much worse as they occur earlier.

Both categories of children with developmental disabilities have a number of special needs or requirements in the field of education and social protection, and those with deficiencies in other plans (medical, etc.). In the case of developmental disorders that occur due to deficiencies, it is especially important to detect as early as possible the respective deficiency and the primary disorder that characterizes it.For example, it is very important to realize as early as possible that a young child has a hearing impairment, because if the appropriate measures are not initiated promptly, the specific disturbance in the development process will inevitably arise in the sense of a serious language disorder (secondary) - dumbness - with all its negative consequences in different planes: in terms of emotional reactions, interpersonal and group relationships, learning efficiency, etc.

In the case of this category of deficiencies - as of all others - there are two alternatives:

- either early detection of the deficiency (with its primary condition) and its prevention, prior to the establishment of secondary developmental disorders by initiating appropriate prosthesis, therapy, education, etc.;
- or delay in detecting the deficiency - with its inevitable consequence: the late onset of rehabilitation measures and the establishment of specific developmental disorders, with the aforementioned negative consequences.

The direct consequence is that the early detection of deficiencies as well as of the poor educational environment as well as the prompt initiation of appropriate therapeutic intervention is a prerequisite for integrated schooling for the deficient children. In other words, the integration in the mass school of a deficient child prepares in pre-school, even in the early years of life. On this background, the special role of the family, the kindergarten, and the teacher of the first classes, in ensuring integration, is obvious.

We have tried, in the above, to demonstrate that developmental disorders are inherent in all deficient children if they do not benefit from optimal living conditions and a qualified therapy initiated from their young childhood. We have also reminded that developmental disorders can occur in other children without deficiencies if their socio-familial and sociocultural environment is poor, deficient and therefore non-stimulating.

In both situations, development disorders generate severe learning difficulties, poor adaptation to school exigencies, causing special needs or special educational needs. But while in children with disabilities the requirements are special especially in the field of education and adaptation to the requirements of the school, in the case of deficient children the requirements are special in a much wider perimeter, including in the field of theprosthesis, health care, social, etc.

Developmental disorders have a number of negative consequences in the educational sphere, especially because the contemporary school is a competitive and normative environment by excellence. This leads to the emergence and consolidation of special educational requirements, which impose specialized support outside classroom hours.

It is, therefore, necessary to implement a system of services appropriate to the individual needs of children with developmental disabilities that satisfactorily support the global integration effort. Otherwise, if there is a well-defined and flexible articulate structure, permanently capable of adjusting to the specific conditions not only to each educational unit but also to each student with developmental disabilities, the final result will be a "school for all", an ideal towards which every modern education system tends.

References:

Achenbach, T. (1974). Developmental psychopathology. New York:Ronald Press.

Black D., Grant J. (2013). DSM-5 Guidebook: The Essential Companion to the Diagnostic and Statistical Manual of Mental Disorders. American Psychiatric Publishing.

Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) (2013). American Psychiatric Publishing.

Gherguț , A. (2005). Sinteze de psihopedagogie specială. Iaşi: Editura Polirom.

Hwang Y.S., Kearney P. (2013). A systematic review of amindfulness intervention for individuals with developmental disabilities: Long-term practice and long lasting effects. Research in Developmental Disabilities. Volume 34, Issue 1, Pages 314–326.

International Statistical Classification of Diseases and Related Health Problems (ICD) (2015). World Health Organization (WHO).

Popovici, D. V. (1998). Elevi cu tulburari de invatare. În Verza E. si Paun E. (1998, coord). Educatia integrata a copiilor cu handicap.București: Unicef, Reninco, pag. 82-89

Popovici, D. V. (2000). Dezvoltarea comunicării la copiii cu deficienţe mintale. Bucureşti:Editura Pro Humanitate.

Popovici, D.V. (2007). Orientări teoretice și practice în educația integrată. Arad: Editura Universității A. Vlaicu.

Radu, Gh. (1999). Psihopedagogia dezvoltării şcolarilor cu handicap. București: Editura Didactică şi Pedagogică.

Radu, Gh. (2000). Psihopedagogia școlarilor cu handicap mintal. București: Editura Pro Humanitate.

Radu, Gh. (2000). Psihopedagogia școlarilor cu handicap mintal. București: Editura Pro Humanitate.

Radu, Gh. coord.(1999). Introducere în psihopedagogia şcolarilor cu handicap. Bucureşti:Editura Pro Humanitate.

Radu, Gh., Popovici, D, V, (1998). Tulburarile de dezvoltare la copii si problematica integrarii scolare. În Verza E. si Paun E. (1998, coord). Educatia integrata a copiilor cu handicap.București: Unicef, Reninco, pag. 73-81.

Verza, E. (2002). Tratat de logopedie vol. I. Bucureşti: Editura Pro Humanitate.

Verza, E. (2009). Tratat de logopedie vol. II. Bucureşti: Editura Semne.