

## **Neuro-Developmental Disorders - Learning Disorders. Specific Reading Disorder: Treatment and Prevention in Greek Children with Learning Difficulties**

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### **Abstract**

The following short article focuses on learning disorders classified as neuro- developmental disorders according to DSM-5. More specifically, what is developed is the concept of the specific reading disorder and the clinical value of timely interdisciplinary diagnosis towards both prognosis and timely treatment. The key towards successfully combating it and eliminating its long-term consequences concerning a child's life is prevention and timely detection through the application of community programs.

**Keywords:** *Neuro-Developmental Disorders; Learning Disorders; Learning Difficulties*

### **Introduction**

Learning disabilities constitute the most frequent problem for which parents seek help at the Child and Adolescent Psychiatric Service of the Community Mental Health Center Byron- Kesariani, 1<sup>st</sup> Department of Psychiatric Clinic, University of Athens where I have been working as a psychologist- educational psychologist for the last nineteen years. To be more specific, the number of demands regarding the assessment of children with difficulties at school reaches an average of 35 - 40% of the total number of calls addressed at the particular Center annually.

These make their appearance once a child starts school or during the first years of schooling and must not be the result of: sensory deficits, persistent visual or auditory deficits, brain damage, diseases and neurological disorders, mental retardation or emotional disturbance. In addition, they must not exist due to: incomplete schooling or external factors such as ignorance or moderate knowledge of the language taught.

What differentiates them from normal variations in school performance is the significant insufficiency of procedures related to building reading and writing skills at school as well as math and not due to discontinuity in teaching or deficiencies [1,2].

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In clinical practice, assessment of skills acquired at school such as reading is extremely important in order for us to come to significant diagnostic conclusions. These not only concern learning, since this directly depends on the quality of the reading skills, but also the particular developmental stage because skill acquisition and development constitute a basic aspect of child development [1]. Moreover, they serve to plan the therapeutic program for each and every child.

### **The concept of learning disorders and the specific reading disorder, as a neuro-developmental disorder**

According to DSM-5 neuro-developmental disorders include learning difficulties. The most common one is the specific reading disorder which has a genetic basis concerning the interaction of genetic and environmental factors, which in turn, affect the ability of the brain to perceive and process both verbal and non-verbal information effectively and accurately. The prevalence of this specific learning disorder in the academic areas of reading, writing and math is 5% - 15% regarding school-aged children, a fact that also applies to Greek reality [3]. It is considered that 10% - 12% of school children appear to have specific deficits in particular academic areas; high quality classroom teaching and supplementary systematic activities in small groups may cause this percentage to drop by 6%. It is estimated that this percentage of 6% of children will meet the strict criteria for Learning Disabilities (LD) and a special educational intervention will be required [4]. Modern studies have shown that the difficulties children encounter towards mastering school learning are connected to their particular development as well as the family circumstances and educational conditions they experience. "The interaction and the mutual reinforcement of these factors make up the clinical picture in regards to every child. Apart from the phenomenological characteristics of their difficulties, what this picture depicts is the emotional and mental procedures which children employ in order to process or counteract their deficits and the situations these create in their everyday life" [5].

Moreover, data from recent research points out that reading ability is directly associated with other areas of development such as written and oral performance, visual-motor and graphokinetic coordination along with visual perceptual abilities not to mention a group of mental and cognitive skills that concern concepts of space and time, numerical concepts and that of body image [6].

In fact, it is supported that there is a common genetic background between speech disorders and communication and the specific reading disorder where this comorbidity reaches 90 - 96% [5-8]. These disorders endanger a child's academic career and their overall functioning.

In the absence of a proper and timely treatment they tend to persist and lead to long term consequences in a child's self-esteem, behavior (marginalization, antisocial and delinquent behavior) and emotions (stress, depression etc.) [9-11].

### **Prevention and therapeutic intervention of the specific reading disorder in children with learning difficulties**

The specific reading disorder is one that a person has throughout their life. The symptoms and the deficits observed may subside if the proper therapy is applied yet the disorder persists for a lifetime. Prognosis depends to a great extent on early diagnosis and timely treatment. In fact, studies suggest that should cases of children having the disorder not be diagnosed, so that they receive treatment at least by the age of nine, 74% of them will continue having symptoms even after they complete secondary school [5].

As far as prevention in our Center is concerned, (Child and Adolescent Psychiatric Service of the Community Mental Health Center Byron- Kesariani, 1<sup>st</sup> Department of Psychiatric Clinic, University of Athens) community programs are applied that aim at a) sensitization and training of the teaching staff of all levels and mainly those working in Primary education by means of seminars, b) timely detection and timely diagnosis of children who appear to have learning difficulties through multidisciplinary diagnosis where a multidisciplinary group of professionals is involved (psychologist, special educator, speech therapist occupational therapist, child psychiatrist and social worker), c) consultation addressing parents, d) collaboration with schools and teaching staff of both regular and integration classes where

individualized educational programs are applied in order to assist children with learning difficulties [12].

Therapeutic treatment is determined based on the clinical picture of the child, and the kind of the disorder (e.g. Comorbidity of the specific disorder in relation to reading and speech developmental disorder) that are found to be accompanied by characteristics pertaining cognitive deficiencies and emotional difficulties. In this framework, it is recommended that children attend both group and individualized multidisciplinary programs combining speech therapy and special education, speech therapy combined with occupational therapy and special education, only special education, psychological support and special education, speech therapy only, or speech therapy and psychological support. All parents of the children who follow the former programs are further advised to attend consultation sessions [13,14].

## **Conclusion**

In conclusion, early detection and timely treatment by means of intensive and systematic intervention regarding neuro-developmental disorders, which have to do with mastery of reading and academic skills on the whole-including speech disorders- lead to prevention of their long term deterioration into severe emotional and psychosocial disorders.

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