Case Report

Association between alterations in brain electrical activity and specific learning disorder in children aged 6 to 10 years old

Keywords: mental disorders, family therapy, social performances, emotional cost, quality of life, educational recovery

Introduction

Specific Learning Disorder (SLD) is defined by the American Psychiatric Association as the presence of continuous learning problems in key academic skills such as reading, writing and math, when hearing, vision and cognition disorders are absent in children aged 6 to 10 years old with primary school education. Diagnostic and Statistical Manual of Mental Disorders, American Psychiatric Association, American Psychiatric Association Publishing. This alteration is one of the most common neurological disorders in children of this age. Specific Learning Disorder: Prevalence and Gender Differences. Moll. Plos One. This tendency is found from 5% to 15% worldwide. Comparison of the Effect of Cognitive Rehabilitation and Neuro feedback on Sustained Attention among Elementary School Students with Specific Learning Disorder: A Preliminary Randomized Controlled Clinical Trial. Azizi. Applied Psychophysiology And Biofeedback. The electroencephalogram (EEG) is the neurophysiological tool which is used for the graphic representation of brain electrical activity. Learning is one of the most complex higher mental functions of the human being: the cortical structures responsible for the processes of literacy and arithmetic are the temporal lobe and parietooccipital cortex which, thanks to the EEG, make it possible to quantitatively and qualitatively describe the normal and abnormal characteristics of these regions. Quantitative EEG as a diagnostic and therapeutic tool. Novo Mexican Society of Bio and Neurofeedback. Karrash followed a group of children with alterations in Brain Electric Activity (BEA) who were under treatment and found that 100% persisted with alterations in semantic language functions compared to subjects without alterations in electrical activity Cognitive Outcome in Childhood-Onset Epilepsy: A Five-Decade Prospective Cohort Study. Karrash. Journal Of The International Neuropsychological Society. At the National Institute of Education (UDEEI) within the framework of the New Structure of the Public Education, i.e., the USAER (The Service and Support Units for Regular Education) and the UDEEI (The Unit of Special Education and Inclusive Education), the medical assessment and follow-up of children with specific learning disorder have not been considered. The Intervention of the Unit of Special Education and Inclusive Education (UDEEI) within the framework of the New Structure of the Basic Education Schools. Secretary of Public Education. It is urgent to correct the possible underreporting of the organic alteration data that can directly influence the academic, work, family and emotional future of children with this disorder as well as the impact it has on the quality of their lives and their family nuclei.

Description of case history

The UNESCO reported that from 2013 to 2017 school completion rates had decreased 85% for the primary school level, 73% for the first cycle of the secondary school level and 49% for the second cycle of the secondary school level. Summary of the monitoring report on education in the world. UNESCO Sustainable Development Goals. These results make us think that there may be a factor that causes the considerable decline of this rate along with diminished academic growth. In Mexico, there is a dropout rate of 0.5% at the primary level per year, an equivalent to 1,193,000 children, which is reflected in economic losses for a developing country like Mexico on account of the absence of long-term technological and scientific development. In spite of the initiatives established since 2014 by the Secretary of Public Education, i.e., the USAER (The Service and Support Units for Regular Education) and the UDEEI (The Unit of Special Education and Inclusive Education), the medical assessment and follow-up of children with specific learning disorder have not been considered. The Intervention of the Unit of Special Education and Inclusive Education (UDEEI) within the framework of the New Structure of the Basic Education Schools. Secretary of Public Education. It is urgent to correct the possible underreporting of the organic alteration data that can directly influence the academic, work, family and emotional future of children with this disorder as well as the impact it has on the quality of their lives and their family nuclei.

Reflexión

i. What is the scope of the timely diagnosis of SLD? How can it impact the quality of life of the child or adolescent?.

ii. What is the social, economic, family and emotional cost of a child who does not finish primary education, or secondary level?

iii. Does the therapeutic care at the pedagogical level that schools offer reflect that they are facing this health problem at the national level?

iv. What kind of initiatives at the federal institutional level could we consider relevant to this reality?

v. In what social, economic and national development aspects would it impact to increase the academic performance of children and decrease the rate of educational recovery?
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Conflicts of interest

The authors declare that there is no conflict of interest.

References

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