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## Poor oculomotor- visual skills efficiency correlates with dyslexia and low reading performance

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earning disabilities are a common problem in the pediatric population and are generally associated to memory dysfunction or mathematical calculations. Efficient reading is accomplished through complex and interrelated processes, one of which is vision. Determining the relationships between vision and learning involves more than evaluating eve health and visual acuity it is a multidisciplinary approach (ophthalmologist, orthoptist/optometrist, posturologist and logopedist) in which all appropriate areas of function are assessed and managed. Current research indicates that some people with reading difficulties, such as difficulties related to dyslexia, have co-existing visual and language processing deficits. Unresolved visual deficits can impair the ability to respond fully to educational instruction. To identify learning-related vision problems we need to fully evaluate the three interrelated areas of visual function: 1) Visual pathway integrity including eye health, visual acuity and refractive status; 2) Visual efficiency including accommodation (focusing), binocular vision (eye teaming) and eye movements; and 3) Visual information processing including identification and discrimination, spatial awareness, and integration with other senses. Efficient reading requires accurate eye movements and continuous brain integration of the information obtained from each eye. The full diagnosis and management of many oculomotor anomalies (ocular dominance, fixation, vergence amplitude, saccade and smooth pursuit) helped by automatic computerized tests are necessary to increase learning ability simply by identifying the one missing micro-skill. Visual training is a method attempting to correct or improve presumed ocular disorders, visual processing, and perceptual disorders. Vision therapy can be broadly divided into two categories. In the first category, classic orthoptic techniques are used to correct accommodative (focusing) and convergence dysfunctions as well as heterophorias (latent misaligned eyes) and refractive errors (need for glasses) that might be responsible for asthenopic symptoms (eye fatigue and discomfort often aggravated by close work). In the second category, often referred to as behavioral vision therapy, eye movement and hand-eye coordination training techniques are used to improve visual processing skills, learning efficiency, and visual-motor integration. Behavioral vision therapy is based on the premise that differences in children's visual perceptual motor abilities exist and that these perceptual motor abilities influence cognitive and adaptive skills such as reading, writing, and motor activities used in activities of daily living. Behavioral vision therapy has been recommended to improve visual skills and processing in the belief that this will improve learning disabilities, including speech and language disorders, and nonverbal learning disorders. In conclusion, the management plan of patient with dyslexia and learning disabilities include treatment, guidance and appropriate referral. The expected outcome is an improvement in visual function with the alleviation of associated signs and symptoms. Vision therapy does not directly treat learning disabilities or dyslexia but improve visual efficiency and visual processing, becoming a part of a multidisciplinary approach thereby allowing the person to be more responsive to educational instruction.

## Biography

He is an Orthoptist of the European Reference Network Center for Low Vision. In 2005, he got general certificate of Education State Secondary School Lyceum specializing in scientific and technological studies "G. B. Quadri" of Vicenza from Italy. In 2008, he completed his degree in Orthoptics and Opththalmologic Assistence from School of Medicine, University of Padua, Italy and from 2009 – 2010 Study Course and Master in Optometry from Institute B. Zaccagnini – Bologna, Italy. In 2017 he Study Course and Training Program entitled: "Visual Training in Educational, Dyslexia and Sport Vision" from Scientific Institute Intervision – Milan, Italy.

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