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Identification of Nonverbal Learning Disabilities in Children

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Many people are familiar with the idea of a Language-based Learning Disability (LLD) that is characterized by difficulties learning to read that are apparent to parents and educators by the early grades.

Less familiar, but equally important to identify and remediate, is the Nonverbal Learning Disability (NLD). Our understanding about what a NLD is and how it will impact upon a child's learning and daily functioning is in its infancy stage. Dr. Byron Rourke, a Canadian psychologist, is a very influential writer and researcher in this area. It is now known that children with a NLD are typically very verbal, do not usually have difficulties initially learning to read, but later often have difficulties with reading comprehension, written language, and aspects of mathematics. Both LLD and NLD difficulties are considered to be related to specific areas of neurophysiological weakness. In the case of the child with a NLD, it is felt that the weakness is in the right hemisphere of the brain. This part of the brain is more involved in visual-spatial processing, making sense of the whole (i.e., integrating and interpreting information as a whole), organizing information, and intuitive understanding (e.g., having insight into social situations). In contrast, the child with a NLD may be very adept verbally, develop an excellent vocabulary, be focused on detail and be logical; all skills served by his or her stronger left hemisphere.

Familiarity with the characteristics of the NLD child will help in early identification which can lead to the development of appropriate academic programs and interventions/accommodations at home and at school.

- Children with a NLD are often very verbal. Furthermore, their verbal skills develop early.
- Spelling skills may be an area of strength for some, but not all, children with a NLD.
- The NLD child often has an excellent rote or short-term memory and can often recall events in his/her life in exacting detail.
- The NLD child is extremely attentive to detail, but has difficulty in grasping the 'bigger picture'. This deficit is aptly captured in the phrase, "He can't see the forest for the trees."
- By grade four or five, the NLD child often experiences some difficulty in reading comprehension. While still a fluent reader with an excellent reading vocabulary, the child may now have trouble recognizing the main point (e.g., due to the tendency to be caught in the details), organizing the various ideas and elements in the story, and integrating different parts of the story.
- While the NLD child is very verbal and does well in academic or intellectual discussions, when he or she has to use language in a social context the child often fails to take into account the perspective of the listener. Furthermore, the NLD child may have difficulty knowing when to begin and end conversations.
- As it is estimated that the majority of communication skills are nonverbal, it is

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common for children with a NLD to have difficulty interpreting visual social cues (e.g., body language, facial expressions, gestures) which can lead to significant difficulties in social interactions and judgement. The child may respond inappropriately because they fail to 'read the social cues' and end up feeling embarrassed or socially ostracized.

- Often children with a NLD have great difficulty adjusting to transitions and to new situations. If there is too much change, too quickly, they can feel overwhelmed.
- Typically, NLD children have difficulties in the area of fine motor skills which can lead to poor printing or writing skills.
- There maybe a weakness in gross motor skills and coordination which can further lower the child's self-esteem and lead to social difficulties.
- While the NLD child may be adept at learning math facts, he or she may encounter difficulties with more visual-spatial aspects of mathematics, such as geometry. Problem-solving may be a challenge. Learning about time, concepts of space and visual array may be difficult.
- The NLD child may have difficulty with spatial skills, which initially might become evident as a weakness when playing with building toys, puzzles (especially 3-D) and later be evident in academic areas such as geography.
- While a good speller, the NLD child may have significant difficulties initiating, organizing and completing written work. In fact, written language difficulties are often the reason that the child is taken to a psychologist, paediatrician or discussed by educators at a school meeting.

One of the ways a parent can find out if their child has a Nonverbal Learning Disability is to have a psychological assessment. Typically, the assessment will include a thorough review of the child's early history, school performance, and medical history. When intellectual tests are administered (e.g., the Wechsler Intelligence Scale for Children - III), it is often found that children with a NLD have a clear superiority in their verbal abilities relative to their nonverbal skills. Often there is

a relative weakness in mathematics, reading comprehension, and written language.

One psychologist, Dr. Maggie Mamen, who has extensive experience working with children with a Nonverbal Learning Disability, has developed the following clinical subtypes: **1) Perceptual; 2) Social; 3) Written Expressive; and 4) Attentional.** Children with perceptual difficulties often have messy and disorganized notebooks, a weakness in spelling, mapping, graphing, and poor task completion. In written work, difficulties with sequencing and reversing of letters in words are found. The child with primarily social difficulties often has trouble making and keeping friends, and may present as odd or as a loner. Children with a significant weakness in written expression often have a history of actively avoiding colouring, copying, and printing; they often have a weakness in their fine motor skills. In the subtype, attentional, the child may present with symptoms suggestive of an Attention-Deficit/Hyperactivity Disorder (AD/HD), but these symptoms are only present at school and not at home or in other community-based activities. Furthermore, testing will often indicate adequate memory for verbal information but difficulty paying attention to visual detail.

There are many effective strategies that can help the child with a NLD at home and at school, once information is available that helps to clearly delineate the child's specific strengths and weaknesses. Parents are encouraged to look into the resources listed below as well as talk with their family physician, resource staff at their child's school, or contact a child psychologist with expertise in this area.

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