

Unlocking The Mystery of Nonverbal Learning Disorder

Dennis Ray Kinder, PhD, HSPP

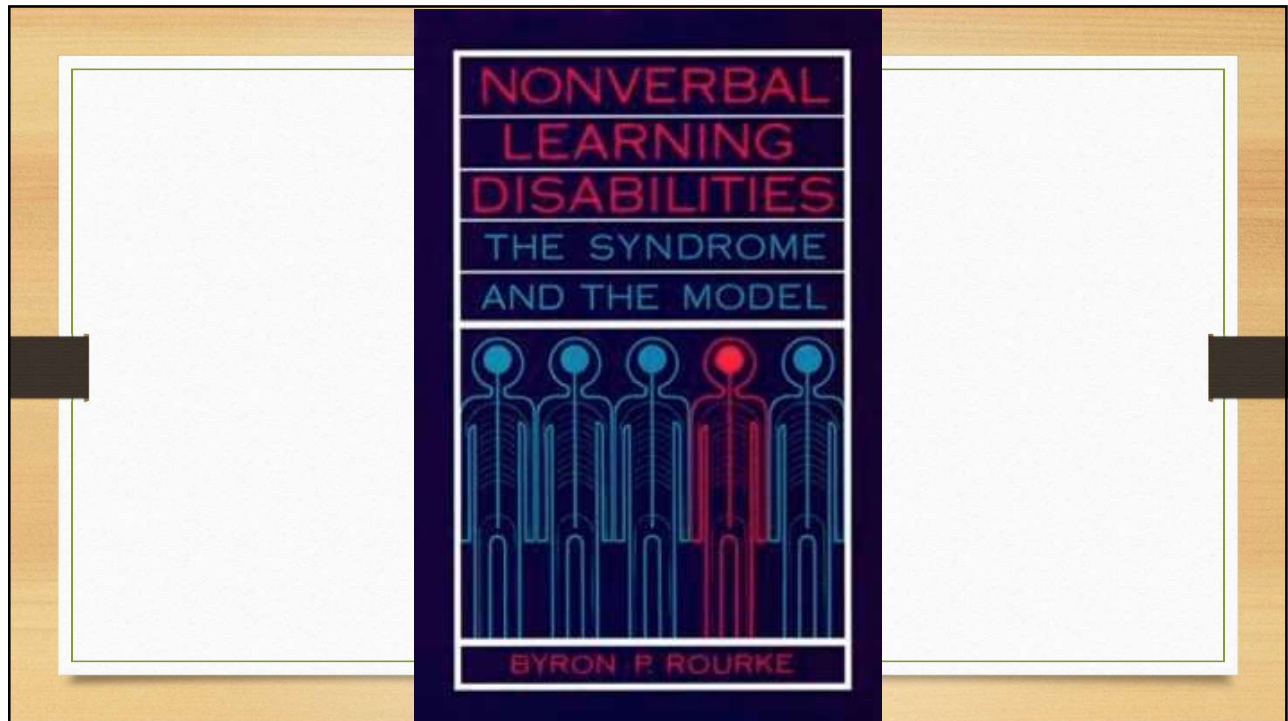
Julie T. Steck, PhD, HSPP

Jillian Wise, PhD, HSPP

CRG/Children's Resource Group

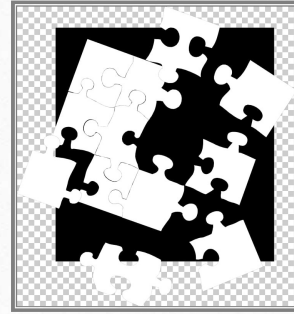
As a result of this webinar, attendees will:

- Identify common strengths and deficits in individuals with Nonverbal Learning Disorder (NVLD)
- Describe the impact of NVLD during different developmental periods
- List three conditions that commonly co-exist with NVLD
- Identify three forms of intervention that may be helpful for individuals with NVLD



Introduction to NVLD – what does NVLD look like in the schools?

- Verbal vs Nonverbal –Significant difference
- Nonverbal weaker
- Math skills weaker compared to language arts
- Weaker at puzzles, handwriting, drawing, social interactions, anxiety



- No evolution of a clearer definition
- No clarity for professionals regarding diagnosing NVLD
- With no consensus on definition then no targeted treatment
- Adding to confusion was controversy regarding ASD/NVLD
- Both can have social difficulties in reading nonverbal cues, body language, emotional expression and body space
- ASD and NVLD clearly distinct entities

- Educators and clinicians get no formal training on NVLD
- Leading to wide variance in knowledge and competency
- Thus many individuals with NVLD do not get the guidance they need



Common Symptoms in those with NVLD

- Visual-spatial reasoning (puzzles, building)
- Organization and synthesis of information (big picture thinking)
- Visual recall (where is the car, where is the exit)
- Spatial motoric integration (drawing, fine-motor skills, clumsy)
- Social interpretive skills (reading body language, facial expression)
- Understanding math concepts (story/applied problems)
- Understanding abstract concepts (slavery during the Civil War, federalism)
- Organizational skills (how we organize space and time)
- Literal interpretations (difficulty with sarcasm or innuendo)
- Change (prefers sameness)

DEVELOPMENTAL SEQUENCE OF NVLD

WHAT PLACES AN INDIVIDUAL AT RISK FOR NVLD?

- Traumatic birth history including prematurity
- Neural tube defects, including spina bifida
- Known neurological conditions such as cerebral palsy or seizure disorders
- Forms of Autism Spectrum Disorders
- Family history of math learning disorders

PRIOR TO GRADE ONE

EARLY SIGNS ARE OFTEN SEEN AS POSITIVE TRAITS

- early language development
- strong rote learning and verbal memory
- frequent questioning
- comfort with conversation, especially with adults
- may have slower motor development or be somewhat uncoordinated
- may have separation anxiety in new situations
- dislike for spatial-organizational tasks and avoidance of fine motor activities

ELEMENTARY SCHOOL

Signs and Symptoms

- perceived as bright due to verbal skills
- acquires reading skills easily
- friendships present some difficulties and the child typically does better with one or two peers
- conscientious regarding schoolwork
- tends to work slowly
- handwriting is sloppy, slow and/or arduous
- problems copying work from board
- anxious in new situations
- lack of “common sense” at times
- in trouble for talking, not completing work, inattentiveness
- may begin to fall behind in math
- signs of anxiety may emerge

MIDDLE SCHOOL

SIGNS AND SYMPTOMS

- student may be perceived as underachieving and unmotivated or over-achieving
- begins to struggle with math and physical sciences
- despite their strong verbal skills and good reading skills, reading comprehension may begin to drop and organization of written work may be problematic
- grades drop dramatically
- poor study habits
- disorganization problems with work and spatial orientation
- peer problems may emerge along with a preference for small groups
- anxiety and/or attention problems are becoming more apparent

HIGH SCHOOL AND BEYOND

SIGNS AND SYMPTOMS

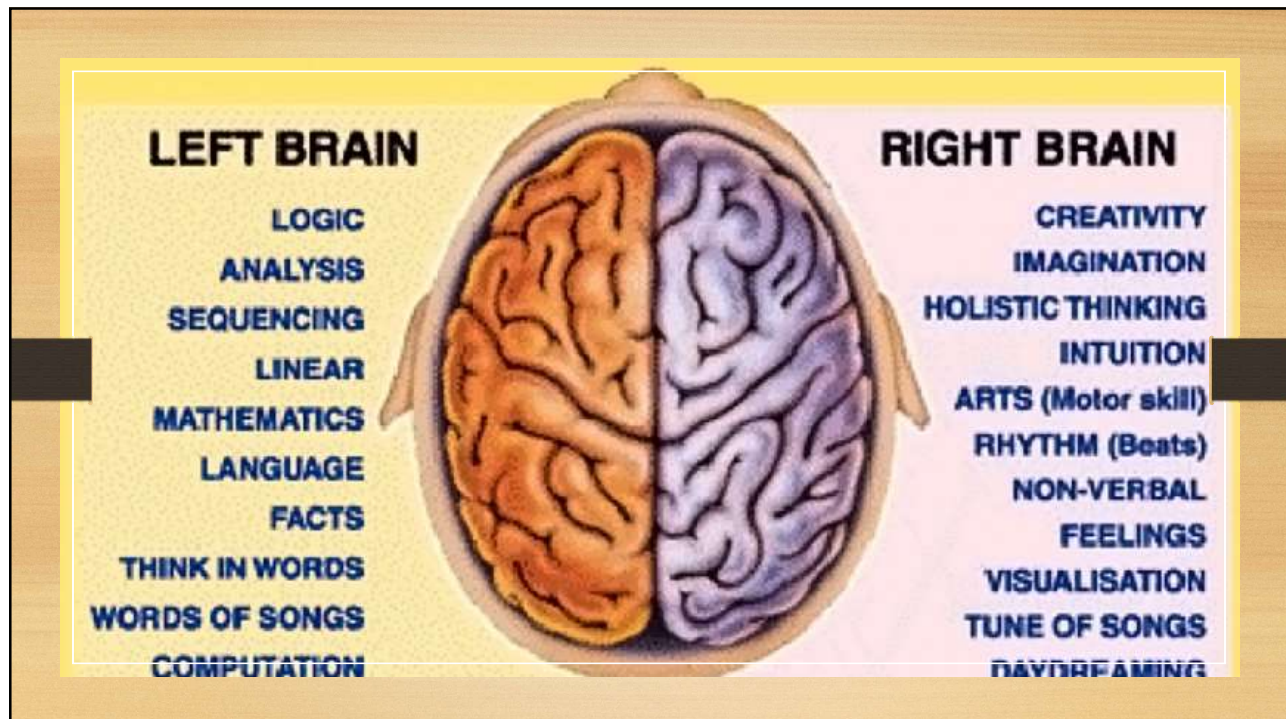
- increased academic difficulties
- problems or anxiety about learning to drive
- increased dependence upon others
- shrinkage of peer group
- increased anxiety and depression
- more difficulty in math and physical sciences
- more difficulty with abstract reasoning than with recall of information
- problems with self-concept

What can we do to support those with NVLD

- Assessment
- Interventions

Diagnosing NVLD through Assessment: Domains Evaluated

- Overall intellectual/cognitive abilities
 - Verbal
 - Nonverbal/visual-spatial problem solving
 - Working memory (short-term memory)
 - Processing speed
 - Determine IQ level



Diagnosing NVLD through Assessment: Domains Evaluated

- Verbal and Nonverbal Learning and Memory
 - Stories, words in lists
 - Pictures, shapes, spatial location
- Language
 - Expressive and receptive language
 - Vocabulary skills



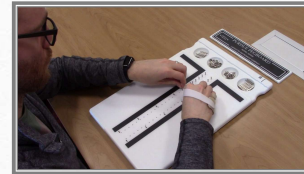
Diagnosing NVLD through Assessment: Domains Evaluated



- Attention
 - Verbal/auditory
 - Visual-spatial
 - Inhibition/impulsivity
- Executive Functioning
 - Planning and organization
 - Organization of materials
 - Multi-tasking
 - Efficiency in learning
 - Forming new concepts and learning from past mistakes
 - Applying appropriate learning strategies

Diagnosing NVLD through Assessment: Domains Evaluated

- Visual-spatial skills
 - Spatial and visual spatial perception
 - Visuo-constructive skills
- Fine motor skills
 - Individual hands and coordination
- Academic skills
 - Reading, mathematics, and writing



Diagnosing NVLD through Assessment: Domains Evaluated



- Social, emotional, and behavioral functioning
 - Mood (anxiety, depression, etc.)
 - Behavior problems
 - Self-esteem/self-concept
- Adaptive Functions
 - Self-care and independent living skills

Diagnosing NVLD



Strengths

- Rote verbal learning
- Simple motor movements
- Single word reading/decoding and spelling
- Verbal and auditory attention

Weaknesses

- Complex motor movements
- Visual-spatial learning and memory
- Written expression, reading comprehension, complex mathematics
- Visual/tactile attention
- Visual-spatial
- Social-emotional and behavioral functioning

Coexisting Diagnoses

- Attention Deficit/Hyperactivity Disorder (AD/HD)
- Anxiety
- Possible mood regulation difficulty
- Autism Spectrum Disorder
- Williams Syndrome
- Turners Syndrome
- Hydrocephalus
- Spina Bifida

What can we do about it? Interventions!

- At a young age, occupational and physical therapy can help with improving motor function and coordination
- Specific tutoring for reading comprehension (thinking in pictures as they read)
- Ongoing tutoring in math to help keep up with new concepts
- Therapy for child/adolescent and family with therapist knowledgeable of NVLD
- Medication to treat co-existing conditions such as anxiety, ADHD, mood lability

EDUCATIONAL STRATEGIES

- Provide step-by-step verbal instructions, especially in math.
- Teach the student how to think in pictures as they read. This will require slowing down the reading process to allow them to describe what they “see” as they read.
- Use visual organizers and specific instructions for writing assignments.

- Watch for confirmation that they understand or have them reword or explain concept in their own words. Don't assume understanding because the individual is nodding their head.
- Explain new information or concepts using concrete verbal terms and visual input (i.e., pictures, YouTube videos, movies of books).
- Allow time for and encourage frequent questions.

- Minimize the time element required for processing of and responding to information. For example, those with NLD often need more time to interpret maps, charts and graphs as they need to convert the visual-spatial aspects of this information to verbal information and then process and determine a response. Or, the individual may have enough anxiety that they feel a need to re-read or clarify information before answering a question.
- Decrease the amount of work or number of activities to be completed.
- Assist with daily organization of time, schedule and materials.

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- Decrease the visual clutter in the classroom and on assignments. Too much visual information (pictures, drawings, graphs) is overwhelming.
- Use clear visual supports for learning such as a visual schedule, a list of class rules, or a number line.
- Provide a digital clock in the classroom as individuals with NLD (especially younger students) are not adept at using an analog clock.
- Provide an alternative to handwriting by use of a scribe and eventually a computer/tablet.

- Approach the student discreetly to see if they have questions (they are not likely to ask in front of others).
- Provide very specific instructions so that the student and family may refer to these.
- Provide a verbal explanation of visual representations (charts, graphs, timelines).
- Allow the student to preview what they will be reading or learning through watching the movie before reading the book, watching a movie about the time period or location of a novel or subject.

- Provide extended time on tests to allow for slower processing.
- Limit copying from a board or textbook.
- Provide a copy of class notes to supplement their own notes.
- If the student benefits from “talking to themselves” as they work, allow them to use a quiet place that won’t distract others.
- Provide preferential seating near the point of instruction and away from distractions so that their work and attention may be monitored.

Questions?

Recommended Resources and Readings

- [The Source for Nonverbal Learning Disorders](#) by Sue Thompson
- [Nonverbal Learning Disorders at School: Educating Students with NLD, Asperger Syndrome and Related Conditions](#) by Pamela Tanguay and Sue Thompson
- [Helping a Child with Nonverbal Learning Disorder or Asperger's Syndrome](#) by Kathryn Stewart.
- [NLD from the Inside Out: Talking to Parents, Teachers, and Teens about Growing Up with Nonverbal Learning Disabilities](#) by Michael Brian Murphy
- <https://ldaamerica.org/types-of-learning-disabilities/non-verbal-learning-disabilities/>

Thank you for attending!

Dennis Ray Kinder, PhD, HSPP

Julie T. Steck, PhD, HSPP

Jillian Wise, PhD, HSPP

CRG/Children's Resource Group
9106 North Meridian St., Suite 100
Indianapolis, IN 46260
phone: 317-575-9111 fax: 317-571-4470
www.childrensresourcegroup.com