

MODULE 28: Diagnosis

Learning disorders like dyslexia can be challenging for children and adults who are diagnosed with it as well as their family members. It can also be challenging for professionals to accurately diagnose the disorder, and distinguish it from other disorders or problems. This module aims to give you a comprehensive understanding of the diagnostic process for dyslexia. While much of the current literature on diagnosing dyslexia is written for children who have the disorder, it is important to keep in mind that adults may also be diagnosed with the disorder.

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28.1 Introduction to Dyslexia Diagnosing

For those unfamiliar with dyslexia, it can be difficult to recognize at first. In most cases, the first signs of dyslexia are often difficulties with reading and learning that are noticed by a child's parents and teachers. These signs may appear before a child reaches school-age. For children who are not yet school-aged, their parents may be the first ones to notice difficulties while the child is at home. For parents, it is very common for these difficulties to cause a lot of stress and anxiety. You should keep this in mind as you prepare to help such families.

28.1.1 Introduction to Dyslexia Diagnosing – Why Screen for Dyslexia?

Consider the story of Kyle Redford, a mother and teacher, who noticed her young son, Dylan, having learning difficulties in preschool [5]. As he struggled with milestones like learning the alphabet and writing his name, she found herself experiencing emotions like disappointment, denial and eventually desperation to figure out what the problem was. As she put it, "most



parents do not have a contingency plan if their children have difficulty hitting the classic benchmarks or performing on command." [p.1].

Eventually, Dylan was properly assessed and diagnosed with dyslexia and his mother Kyle was relieved that his reaction was positive. It meant that he no longer felt "stupid." Instead, he started to feel special and empowered with not only a name for his difficulties, but tools to address them. And the family found support from their family, friends, and community members who pointed out the many famous, successful people with the disorder.



Thus, a major benefit to screening and diagnosing dyslexia is to help empower those who have it, and to work on the reading and learning challenges that come with it. Once these challenges have a name, valuable steps can be taken to address the disorder. Another major benefit is that a formal diagnosis often gives the child access to specialized learning resources in their schools and communities.

28.1.2 Introduction to Dyslexia Diagnosing – Initial Steps of Dyslexia Diagnosing (1 of 1)



Parents who suspect their children may have a learning disability will often first consult with their child's teachers (if the child is school-aged), or with their child's pediatrician. As a therapist, working with a family whose child may have dyslexia, it is important for you to keep in mind that the child's parents have likely gone through some stress and anxiety while seeking answers. Furthermore, they may have gone through a number of different professionals before you see them and will need your patience and guidance.

Testing for dyslexia may be initiated by a child's parents or may be recommended by a child's school teachers. An assessment plan may be created by the school's team of professionals, and can be carried out once parents have given their consent [4]. If a school does not have the proper resources to conduct the testing, they may refer a family to outside professionals. This may include psychologists or other therapists who specialize in testing and treating learning disorders such as dyslexia [4].



As a Dyslexia Therapist, a family may be referred to you or locate your services on their own. Either way, you should be prepared to be in regular communication with the child's teachers and other professionals throughout the diagnostic process. This will help you with the data collection you will need, and ultimately help the child get the help that he or she needs.

28.1.2 Introduction to Dyslexia Diagnosing – Initial Steps of Dyslexia Diagnosing (2 of 2)



The main steps in diagnosing dyslexia include [6]:

- Creating a case history,
- Collecting information from observations,
- Administering structured assessments, and
- Analyzing all of the data collected from these steps.



A thorough diagnosis should also include medical testing by the child's doctor. This will help to rule out any medical conditions (e.g., vision or hearing problems) that may be causing the child's learning challenges.

As a therapist working with the child, it is important to set realistic expectations for the family. Let them know that there is no quick or single-test way to identify dyslexia [7]. Rather, it will take collaboration by several professionals and possibly several weeks to make a diagnosis.

28.2 Case History

Creating a comprehensive case history is the first step in making a dyslexia diagnosis [6]. This is the pre-assessment step of the dyslexia diagnostic process. In other words, this step comes before the formal, structured assessments used to diagnose dyslexia. The main purpose is to collect valuable background information on the child and his or her family members. This will provide valuable data that will assist you in making the final determination for the diagnosis.

As a Dyslexia Therapist, it is a good idea to develop a standard case history template that can be used for multiple cases. You will want to collect background information on the child and their



family members. If you are working with an adult, who may have dyslexia, you should adjust this template to be sure it is appropriate.

28.2.1 Case History: Information to Collect During the Case History Process

The following chart shows some information you should collect during the case history process [6]:

- **Personal** Collect basic information including name, date of birth, residence (e.g., **Information** record if the child resides in more than one household), school (including names of any teachers or counselors), languages spoken, etc.
- Reason for
ReferralCollect information about what prompted the child's parents to seek a
dyslexia diagnosis (e.g., the child has had difficulties reading for the past 12
months).
 - Medical Collect information about the child's medical history. You will need to get written consent from the child's parents to exchange information with the child's medical doctors. This will give you the most accurate view of their medical history. If this is not possible, collect as much data as you can by interviewing the child's parents. Ask about any prenatal complications, birth disorders or complications, developmental delays or disorders, illnesses, etc.
- **Educationa I History** Collect information about the child's educational history. (This does not apply if the child is not yet school-aged, but you may still want to collect data on any home-based educational activities that have happened with the child's parents.) You will need to communicate with the child's teachers and any school counselors that have been working with the child. Be sure to retrieve data about milestones reached or not reached, and the difficulties that have been noted. If the child has an Individual Education Plan (IEP) in place, be sure to access this and thoroughly review the contents. It may need adjustments if a dyslexia diagnosis is made later.



Family Collect information about the child's family history. You should note if any other family members have been diagnosed with dyslexia or other learning disorders. Even if family members have not been diagnosed, you should ask if any family members have exhibited challenges that are similar to those associated with dyslexia.

28.3 Observations

After you have created a case history, collecting information from observations is the next step in making a dyslexia diagnosis [6]. The observation part of the process allows you to collect first-hand data from the child about his or her challenges. One way to do this is by having an informal conversation with the child.

You should accomplish three main goals during the observation process:

- 1. Create a rapport and begin building a strong relationship with both the child and his or her caregivers
- 2. Collect data through your own observations about the child's skills and challenges that may indicate the presence of dyslexia
- 3. Explain the formal assessment process so that the child and family know what to expect

28.3.1 Observations – Relationship Building

It is important to keep in mind that meeting with professionals in formal settings can be intimidating and very stressful for children, especially younger children. You will want to do your best to help put the child at ease while you interview him or her. Doing things like making your office more child-friendly (e.g. bright colors, having toys available for play), having at least one parent or caregiver present, and creating a rapport with the child (e.g. showing an interest in their favorite activities, highlighting similar interests) can help relieve this stress and make the observation process go more smoothly.

You should take a bit of time to get to know the child's family members, who are present, during the observation period. Recognize that they may be worried, anxious, and stressed about their child's challenges. Be sure to show empathy for these feelings. You can authenticate their experience by letting them know that it is common for families to experience a range of emotions



when their children are having learning challenges. It is also recommended that you give the family a chance to ask questions during the entire process.

28.3.2 Observations – Data Collection through Observation (1 of 4)

After you have put the child at ease and started building a strong relationship with him or her, and the family, you will want to informally collect data about the child. Look for information that is pertinent to a dyslexia diagnosis [6]. A simple way to do this is to ask the child questions like "Do you enjoy reading?" or "What do you like or dislike about reading?" Asking about their experiences in school can also be helpful.

Have the child do some basic, age-appropriate tasks, and take note of what happens. If the child tries to read, does he or she reverse letters in words? Or if the child tries to recite the alphabet or read a sequence of letters, does he or she skip over letters? If the child tries to write, is their handwriting illegible or unusually messy for his or her age? Does the child exhibit a lot of frustration with these tasks?

28.3.2 Observations – Data Collection through Observation (2 of 4)

The following chart shows you some areas to note for informal observation [3]. You may want to collect data about these areas by asking the child and/or parents questions about these areas, as well as through your direct observations.

Readin

- Does the child show difficulty remembering letters, words, or numbers?
- g
- Does the child appear to show reading difficulties like skipping or reversing words or letters?
- Does the child have an unusually slow reading ability for his or her age group?
- Does the child appear to have difficulty visually focusing on words or letters? (e.g., signs may include head tilting or finger pointing)
- Does the child report that words or letters are blurry as they try to read, or frequent headaches or dizziness during reading?



- Does the child appear to have unusually messy or illegible handwriting for his or her age group?
- Memory
 Does the child appear to have difficulty remembering things that require reading or spelling? (e.g. days of the week, the alphabet, number sequences)

28.3.2 Observations – Data Collection through Observation (3 of 4)

You will want to collect data through your observations on how the child and his or her caregivers interact around activities like reading. For example, what do you notice happening if a father tries to encourage his daughter to read a short story in front of you? Does the child make an effort or shy away from this activity? If the child struggles, does the parent try to complete sentences for the child or patiently wait for the child to read through them? This information may help you develop an individualized treatment plan for the child if they are later diagnosed with dyslexia.



Finally, collect data through your observations about the child and family's experience related to the possible diagnosis. This entails how the child has reacted to his or her learning challenges. For example, does the child get upset when talking about their difficulties and try to change the subject, or do they openly share their experience? Does the child's self-esteem seem to have



been affected (e.g., calling themselves stupid)? Have their learning challenges affected their friendships?

Observing the family during the experience can be helpful as well. Are they in denial that there is a problem or eager to find a diagnosis and get help? Do they seem to have negative judgements about children with learning disorders, misinformation about the disorder, or special education services available? If so, these factors may influence the treatment process later.





y kindergarten, almost everyone I encountered-teachers, friends elatives, doctors-were still telling me she was "fine," that she'd "grow ut of it." But I couldn't deny what I was seeing. She was almost seve ow, had received over two years of excellent instruction in phonics, an he was still having trouble linking letters with their sounds. She also ontinued to have tremendous difficulty finding words when she wa alking. She'd say, for example, "Can I have a sandwich with... um... uh. nat... stuff on it?" I'd throw out several guesses-peanut butter heese? turkey?-and wait until we had a match. "Yes, that's it," she' ay matter-of-factly, "turkey."

he also continued to be confused by concepts that seemed to clic vith other kids her age, such as the meaning of words like "before" an after," and "yesterday" and "tomorrow." The days of the week continue belude her. She could recite them in order when connected with a little ong, but she had no understanding of the fact that they made up veek, or that they repeated themselves every seven days.

~ Kasten, 201

28.4 Assessments (1 of 5)

Once you have created a case history and conducted thorough observations with the child, the next step, to diagnosing dyslexia, is to create an assessment plan. Assessment plans may vary across professionals (e.g., psychologists, licensed counselors), and may vary depending on the child in question. However, a thorough formal assessment should be comprised of tests in five different areas [4]:

- Sensory/Motor Skills
- Physical Health/Development
- Academic Performance
- Cognition
- Communication

In order to test the first two areas, sensory/motor skills & physical health/development, you should collaborate with the child's pediatrician to be sure these areas are tested. Be sure to gain the written consent of the child's parents in order to exchange information about the child's case



with his or her doctor. Medical testing will help rule out any physical problems that may be accounting for the child's learning challenges such as vision problems.

As you conduct an assessment, keep in mind that children from multicultural backgrounds (e.g., whose first language is not English) may have difficulties with testing or appear to score lower than they would if they were tested in their primary language. Also, it may be good to informally assess for school behavioral problems. Often, children with dyslexia may display behavior problems in an effort to cover up their learning challenges (e.g., not responding if a teacher asks them to read aloud) [6].

28.4 Assessments (2 of 5)

In order to test the next area, academic performance, you should collaborate with the child's teachers and school administrators to evaluate any test scores that have been recorded so far. Comparing these scores to norms will help identify if the child is testing within his or her normal range for children around the same age and grade level.

To test the next area of assessment, cognition, a number of standardized intelligence tests can be utilized. As a Dyslexia Therapist, you should only use these tests if you are both licensed and trained to do so, as many require special training to administer and interpret. Examples of tests that can be used to test for cognition include [4]:

- 1. Beery Developmental Test of Visual-Motor Integration
- 2. Bender Gestalt Test of Visual Motor Perception
- 3. Expressive One-Word Picture Vocabulary Test
- 4. Kaufman Assessment Battery for Children (KABC)
- 5. Kaufman Tests of Educational Achievement (KTEA)
- 6. Motor-Free Visual Perception Test
- 7. Peabody Individual Achievement Tests-Revised (PIAT)
- 8. Peabody Picture Vocabulary Test-Revised
- 9. Stanford-Binet Intelligence Scale
- 10. Test for Auditory Comprehension of Language
- 11. Test of Auditory Perception (TAPS)
- 12. Test of Visual Perception (TVPS)
- 13. Visual Aural Digit Span Test (VADS)
- 14. Wechsler Individual Achievement Tests (WIAT)



15. Wechsler Intelligence Scale for Children-Third Edition (WISCIII)

16. Woodcock-Johnson Psycho-Educational Battery

28.4 Assessments (3 of 5)

In order to test the final area of assessment, communication, there are several different areas that can be tested. These tests will tell you how well the child can communicate both verbally and in a written manner, and how well he or she can comprehend written communication. The chart on the next two pages summarizes some areas that you should include in your assessment if at all possible. These areas have been outlined by the University of Michigan's Dyslexia Help Center [6].





28.4 Assessments (4 of 5)

Language Depending on a child's age, testing for language (e.g., using standardized tests hay need to be included in the assessment. The goal would be to measuranguage skills including processing, expression, morphological skills (whic nclude the child's ability to recognize, understand, and use word parts like refixes and suffixes), and pragmatic skills (which include the use of language or socializing with others). Examples of tests include the Test of Pragmati anguage (TOPL) and Test of Early Written Language (TEWL).



Phonological esting for phonological awareness involves testing a child's understanding an Awareness se of phonemes in words. A key feature of dyslexia is having troubl lentifying or combining these in words. This will also be evident by difficult eading nonsensical words (e.g., fornalask). Testing in this area will asses ifficulties with skills such as rhyming words, counting phenomes, and movin henomes within individual words. An example of a test is the Comprehensiv est of Phonological Processing (CTOPP).

Rapid Namingesting for rapid naming (also called word fluency) assesses how fast a perso Word Fluency an name words, symbols, and pictures. Even a child with reading difficultie an usually do this, however their speed will be far slower than other childre *i*thout dyslexia. The Comprehensive Test of Phonological Processing include Rapid Naming Quotient (RNQ).

Reading esting for reading fluency assesses how fast and accurately a person cal sad. It is common for dyslexic children to read accurately, but at a much slowe ate than other children which indicates poor fluency. You should collect data o ne average number of words a child can read accurately per minute whil sading a sentence or paragraph (for older children).

28.4 Assessments (5 of 5)

- **Reading** esting for reading comprehension assesses a person's understanding c **Comprehension** rords in print. A child with dyslexia may be able to read passages, but wi ften have a hard time comprehending the material, especially if it is long in example of a test for this is the Woodcock Reading Master ests-Revised (WRMT-R).
 - **Spelling** esting for spelling will indicate how well a child can spell words an ounds. Difficulties in this area will often become apparent during readinests. Also, there are tests like the Test of Written Spelling (TWS) designed are assessment in this area.



Writing esting for writing will indicate skills such as how well a child can produc vords/sentences, create cohesive sentences, and master the mechanics or riting. Difficulties in this area will often become apparent during readinests. Examples of tests in this area include the Oral and Written Language icales: Written Expression (OWLS Written Expression), Test of Writter anguage (TOWL), Test of Early Written Language (TEWL). (Note: Testing some areas may have overlap with other areas.)

28.5 Analyzing Data



Once you have completed the steps involved in creating a case history, conducting observations, and administering formal assessments, you will need to analyze all of the data you have collected. This includes data from multiple sources including the child, teachers, school counselors, medical doctors, and family members. If the formal assessment score falls below certain levels, and you receive information from other sources that the child displays sign of dyslexia, it will likely be appropriate to make the diagnosis.

Once it is made, record the diagnosis properly in the child's case file. Inform the child and his or her parents of the diagnosis. Be sure that you have local support resources to offer the family. Communicate the diagnosis to the child's doctors and the school so that a proper educational plan can be developed (or revised if one was already in place). Be sure to reassure the child and their family that dyslexia can be effectively managed with proper educational tools.





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