Two Common Reading Problems Experienced By Many AD/HD Adults

Kevin T. Blake, Ph.D. P.L.C.

Only in the past few decades has adult AD/HD been recognized. The same is true of adult learning disorders. The most common of the learning disorders, Reading Disorder, has been researched in children for over 100 years, but only relatively recently in adults. Even more recently still, scientists have begun to study individuals who have both AD/HD and Reading Disorder. The following will discuss the diagnosis and treatments of two types of Reading Disorders that can afflict adults with AD/HD.

Reading Disorder-Dyslexia

The first of these is Reading Disorder-Dyslexia (RDD). Since the 1960s, the National Institute of Child Health and Development (NICHD) has been conducting the Research Program in Reading Development, Reading Disorders and Reading Instruction. This research has included thousands of adults and children with RDD, and has been conducted at 42 sites in the United States and Europe. Similar research projects have been conducted in Russia, China, England, Sweden and Turkey (Lyon, 1999).

Although the percentages fluctuate from study to study, about 25 to 30 percent of AD/HD adults have RDD. The NICHD research, as well as other studies, has demonstrated AD/HD and RDD are separate and distinct disorders. However, when they both exist at the same time, these disorders can have a negative effect on each other. Additionally, many adults with RDD and/or AD/HD have a history of language disorders in childhood.

The NICHD found RDD to be an inherited disorder that causes significant anatomical differences in the brain resulting in reading difficulties (Sherman, 1999). Additionally, it was discovered RDD is a lifelong disability that afflicts one in five Americans (Lyon, 1999). Equal numbers of men and women have RDD and it is not connected to intelligence (Young, 1999). In other words, you can have low or high I.Q., be male or female and still have RDD.

Perhaps the most important discoveries the NICHD has made about RDD is what Nancy Mather (Mather, 2000) calls the "triple deficit hypothesis." This includes weaknesses in phonological awareness, rapid automatized naming and orthographic processing. Of these three deficits, the research indicates phonological awareness is the key. Phonological awareness allows a person to manipulate or study the individual sounds in words. People with RDD have great difficulty connecting sounds to symbols in words and pronouncing words phonetically. The second deficit, weak rapid automatized naming, means those with RDD are impaired in their ability to rapidly name objects they see. This "dysnomia" appears to be connected to slowness in overall sensory processing speed that makes reading even slower for those with RDD and makes

remembering names of objects and people difficult. Reading is not an "automatic" process for those with RDD; it tends to be quite labored. The third deficit, weak orthographic processing, is remembering how words look when correctly spelled and how the letters relate to the phonics of the word. Thus, the adult with RDD will have difficulty spelling due to his/her poor ability to connect sounds to letters (phonological awareness) and poor memory of how the word looks when spelled correctly.

The most common manifestation of RDD in adults is slow and labored reading and very poor spelling. RDD adults can also have disorders of depression and anxiety, as well as suffer from low self-esteem.

How is RDD diagnosed? The *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) (1994) provides a "bare bones" diagnostic criteria. Essentially, administering a standardized I.Q. test and test of reading achievement to determine if the person's I.Q. is substantially higher than their reading achievement is adequate to "diagnose" RDD. However, the NICHD research indicates such a technique does not differentiate those with RDD from those with a poor educational background, low intellect or other reasons for reading difficulties. A standardized I.Q. test and test of reading achievement can be helpful to determine if an adult suspected of RDD has sufficient intellect for particular work or educational settings, and may point out academic skill weaknesses. However, the NICHD research indicates tests of phonological awareness (i.e., phonemically regular nonsense word reading – "noil", etc.), rapid automatized naming (i.e., Boston Naming Test, etc.), and orthographic processing (i.e., a standardized spelling test) are necessary to diagnose RDD. Such an evaluation should include an in-depth historical interview to determine if other disorders accompany RDD, like AD/HD and emotional disorders, are present. Psychologists, in conjunction with educational therapist/clinical learning specialists, can conduct such evaluations.

Treatment Options and Accommodations

How is RDD treated in an AD/HD adult? First it is recommended the adult make sure their AD/HD is properly treated. This includes management of their AD/HD with medication and learning how to compensate for their AD/HD by working with an AD/HD coach. If needed, a mental health professional can address emotional concerns such as depression, anxiety or family problems. Will this cure their RDD? No, but chances are they will be better able to respond to the following training by being able to control their AD/HD symptoms of impulsivity, hyperactivity and inattentiveness.

Once the RDD symptomatology has been addressed, the RDD issues can be overcome. Although the NICHD research indicates that there is no cure for RDD, many RDD adults can improve their reading skills by being taught to read with a systematic-synthetic-multisensory-phonics technique. For example, the adult with RDD is asked to look at a printed phoneme (one of the 44 sounds of the English language in written form), make the sound of the phoneme (i.e., **B – "bu"**, etc.) and then with their fingers trace the letter as they look at it and say the sound. This "see it - say it – trace it" technique has been quite successful in teaching those with RDD to read. Perhaps the best known of

these teaching methods is Orton-Gillingham. However, there are over 10 other systematic–synthetic-multisensory-phonics techniques are equally helpful.

More advanced readers are given multisensory training in prefixes, root words and suffixes. For example, the adult has a card with a prefix printed on it presented to them; they look at it, say it and trace it. These techniques require substantial drill. In the end, many adults with RDD and AD/HD combined will find substantial improvement in their reading using such techniques. Such training can often be obtained from educational therapists/clinical learning specialists, some adult literacy volunteers and some speech language pathologists.

In addition to training in multisensory-synthetic-multisensory-phonics, there are several work and educational accommodations that can be helpful to eligible adults with RDD. Some of these include Recordings for the Blind and Dyslexic, Kurzweil reading machines, voice activated computers, hand held spelling checkers, Quicktionary Reading Pen, readers for exams and others.

Many AD/HD adults with RDD are offered protection under Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 against discrimination in employment and/or educational settings and many receive accommodations for their disabilities if they qualify. Professionals who diagnose reading/learning disorders need to familiarize themselves with the Association for Higher Education and Disability (AHEAD) (1997) Guidelines for Documentation of a Learning Disability in Adolescents and Adults. It is important that professionals who write reports to document the RDD/learning disorders of their clients follow these guidelines. By doing so, they can help insure their clients who qualify can receive the work and educational accommodations they need.

Reading Disorder of Recall/Comprehension

Unfortunately, the second Reading Disorder that many adults with AD/HD tend to experience has not been researched as much. Currently, it is not known what percentage of AD/HD adults suffer from it or the ratio of women to men. However, many clinicians describe AD/HD adults who state they can read fluidly both silently and orally, pronounce all the words, read at an adequate rate and are good spellers, but they cannot remember what they read. This reading problem has not had a consistent name associated with it in the scientific literature. Some have called it “Word Calling” or nonspecific reading disability” (Aaron and Baker, 1991, p. 46-47). The term word calling can be confusing because it can be associated with what is called Hyperlexia. This disorder is found in many people with autism spectrum disorders such as Asperger’s Disorder. This is not the same type of reading disorder. For this article, the type of reading disorder previously described in which AD/HD adults do not remember what they read will be called Reading Disorder of Recall Comprehension (RDR/C).

Most AD/HD adults with RDR/C have adequate phonological awareness, orthographic processing and rapid automatized naming. In fact, they have no symptoms

of RDD at all. They just do not remember what they read. Some complain of this after reading a sentence and others after reading a few pages. Scientists are not absolutely certain what causes this disorder, but there is accumulating evidence that it could be due to a weakness in working memory. This type of memory allows us to keep an idea in mind long enough to manipulate it for a few seconds. The two types of working memory involved appear to be verbal and non-verbal in nature. Russell Barkley, Ph.D. (1998) describes verbal working memory as "internal speech." He states weaknesses in this area are one of the keys of his theory of AD/HD. Non-verbal working memory aids us in planning, remembering the spatial location of objects and gives us a sense of time. Deficits in these two working memory systems often come together in AD/HD adults to create difficulties in remembering what they read, thus resulting in a reading comprehension problem. Often adults with RDR/C will have other subtle language comprehension problems.

People with RDD may also have difficulty with reading comprehension, but this is due to weaknesses in phonological awareness and orthographic processing, as well as rapid automatized naming. AD/HD adults with RDR/C tend to not have these difficulties; their weaknesses stem from the above mentioned memory deficits. Additionally, AD/HD adults with RDR/C can also have RDD.

Diagnosis and Treatment

How does one diagnose RDR/C? Again, the Diagnostic and Statistical Manual (DSM-IV) offers a "bare bones" assessment suggestion. An evaluation that includes I.Q. testing and a thorough examination of all reading skills, especially reading comprehension, is suggested. This should include sentence and paragraph comprehension. It is also suggested additional evaluation of working memory, listening comprehension and a thorough historical interview be conducted. Often a psychologist and/or educational therapist/clinical learning specialist can do the reading evaluation. A psychologist should conduct the intellectual testing. Sometimes AD/HD adults with RDR/C will also have problems with listening comprehension and other language processing problems. In such cases, a thorough evaluation by a speech language pathologist is urged. Like those with AD/HD and RDD, AD/HD-RDR/C adults can have co-morbid conditions such as depression and anxiety. These should be evaluated by a mental health professional. It is recommended that written reports of the evaluation for such a disability follow the AHEAD Guidelines.

Treatment for RDR/C is multifaceted. Often those with RDR/C find significant reduction in their recall and comprehension problems when they are placed on stimulant medication. Those who do not respond sufficiently to this may need to work with an educational therapist/clinical learning specialist to learn methods of actively monitoring what they are reading. This would involve learning ways to survey material prior to reading it—taking note of the bold print, italicized words, pictures, headings, footnotes, etc. in the text in order to construct questions to answer while reading. Once they have written down questions, they actively read the text with the idea of answering them. When they come to an answer to a question, they write it down. These questions and

answers can be used for review. The above technique is often called SQ4R, but there are many similar techniques that are just as appropriate. Most educational therapists/special education teachers and clinical learning specialists are familiar with such techniques and can teach them.

Nanci Bell (1991) believes people with RDR/C do not adequately use visual or mental imaging as they read. She has developed a program to teach adults with RDR/C how to image while they read. She believes learning how to image what is read will allow them to generalize and grasp the global concepts of the material. The program is also said to help those with difficulty in oral expression, oral language comprehension and some written language skills. It is said to help those with RDR/C create entire images that include color and movement. Initial results of the use of this technique have been promising. Often speech language pathologists are trained in the use of this program.

For severe cases of RDR/C, it is suggested that treatment be sought from a speech language pathologist.

Many RDR/C adults qualify for protection under Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. Several of the above mentioned workplace and educational accommodations are useful for those with RDD are also helpful with RDR/C. However, the specific accommodations must be assigned according to the specific disability profile of the individual. It is recommended that reports of evaluations of such reading problems follow the AHEAD (1997) guidelines.

AD/HD adults can have both RDD and RDR/C and these two reading problems can cause great frustration. Therefore, it is important that adults receive thorough evaluations of their reading problems, as well as appropriate treatment and accommodations. By doing so they can be more successful in school and work, and possibly have a better quality of life.

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References

Aaron, P.G., and Baker, C. (1991). *Reading Disabilities in College and High School: Diagnosis and Management*. Parkton, MD: York.

Association on Higher Education and Disability (AHEAD) (1997). *Guidelines for Documentation of a Learning Disability in Adolescents and Adults*. Available from: AHEAD, P.O. Box 21192 Columbus, OH 43221-0192; www.ahead.org

American Psychiatric Association (1994). *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition.* Washington, DC: American Psychiatric Association.

Barkley, R.A. (1998). *Attention Deficit Hyperactivity Disorder, Second Edition.* New York, NY: Guilford.

Bell, N. (1991). *Visualizing and Verbalizing for Language Comprehension and Thinking*. San Luis Obispo, CA: Grander Educational Publishing.

Lyon, G.R. (November 4, 1999*) . In Celebration of Science in the Study of Reading Development, Reading Disorders and Reading Instruction*. Paper presented at the International Dyslexia Association, 50th Anniversary Conference.

Mather, N. (February 16, 2000). *So What's Up with Dyslexia?* Paper presented at the 37th Annual Conference of the Learning Disability Association, Reno, NV.

Sherman, G. (November 4, 1999). *Anatomical and Cognitive Variability in Developmental Dyslexia.* Paper presented at the International Dyslexia Association, 50th Anniversary Conference, Chicago, IL.

Young, G. (October 25, 1999). *Ten Years of Progress*. Paper Presented at the Learning Disabilities Association of Arizona, 29th Annual Conference, Phoenix, AZ.

Professional Books Related to Adult Reading Problems

Aaron, P.C., and Baker, C. (1991). *Reading Disabilities in College and High School: Diagnosis and Treatment.* Parkton, MD: York.

Bell, N., (1991). *Visualizing and Verbalizing for Language Comprehension and Thinking*. San Luis Obispo, CA: Grander Educational Publishing.

Clark, D.B. (1988*). Dyslexia: Theory and Practice of Remedial Instruction*. Parkton, MD: York.

Cramer, S.C., and Ellis, W. (1996). *Learning Disabilities: Lifelong Issues*. Baltimore, MD: Paul H. Brooks.

Duane, D.D. (1999). *Reading and Attention Disorders: Neurobiological Correlates*. Parkton, MD: York.

Goldstein, S. (1997). *Managing Attention and Learning Disorders in Late Adolescence and Adulthood: A Guide for Practitioners.* New York, NY: John Wiley and Sons.

Gordon, M. and Keiser, S. (1998). *Accommodations in Higher Education Under the Americans with Disabilities Act (ADA).* New York, NY: Guilford.

Materials about Reading Disorders

Kantrowitz, B., and Underwood, A. (November 22, 1999). Dyslexia and the Science of Reading, *Newsweek,* 72-78.

Lord, M. (February 21, 2000). Not Just Kid Stuff Any More. *US News and World Report* 128 (7), 48-49.

Shaywitz, S.E. (November, 1996). Dyslexia. *Scientific America,* 275 (5), 98-104.

Silver, L.B. (1998). *The Misunderstood Child – Third Edition*. New York, NY: Times Books. (Has an adult section).

Nosek, K. (1997). *Dyslexia in Adults*. Dallas, TX: Taylor.

Places to Go for Help

CHADD
8181 Professional Place, Suite 201, Landover, MD 20785; (301) 306-7070; www.chadd.org

International Dyslexia Association
8600 LaSalle Road, Chester Building, Suite 382
Baltimore, MD 21286-2044; (410) 296-0232; www.interdys.org

Learning Disabilities Association
4156 Library Road, Pittsburg, PA 15234; (412) 341-1515; www.ldanat.org

Recordings for the Blind and Dyslexic
20 Roszel Road, Princeton, NJ 08540. (866) 732-3585; www.rfbd.org

Literacy Volunteers of America
5795 Widewaters Parkway, Syracuse, NY 13214. (315) 445-8000.

Lindamood-Bell Learning Processes
416 Higuera Street, San Luis Obispo, CA 93401; (800) 233-1819; www.lblp.com