

Chapter 28

Addressing Word Recognition Difficulties of Adolescents With Dyslexia: Phonological Awareness and Reading Fluency

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ABSTRACT

This chapter provides a comprehensive overview of evidence-based word analysis approaches for promoting accurate and fluent reading of complex words by adolescents with a specific reading disability (i.e., dyslexia). First, research has been reviewed to pinpoint the characteristics and causes of dyslexia as a specific learning disability. Specifically, two theories of dyslexia, the phonological theory of dyslexia and the magnocellular theory of dyslexia, have been discussed to ascertain the causal attributes of phonological awareness deficits and auditory and visual sequencing deficits to word recognition difficulties of adolescents with dyslexia. Next, two theories of word recognition, particularly the dual-route model of word recognition and connectionist model of word recognition, have been discussed to clarify the mechanism underlying the manifestation of dyslexia and resultant difficulties with word recognition. Finally, evidence-based word analysis programs have been described as approaches for improving word reading ability of adolescents with dyslexia.

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INTRODUCTION

According to the National Center for Education Statistics (NCES, May 2019), the number of students in the United States of America who received special education services under the Individuals with Disabilities Education Act (IDEA) was 14 percent (i.e., 7 million) of all students in 2017-2018. Out of the total number of students who had received special education services, 34 percent (i.e., 2, 342) had a specific learning disability, and 80% (approximately 15 percent) of the students identified as having a specific learning disability had dyslexia (<https://www.dyslexia-reading-well.com/dyslexia-statistics.html>). A specific learning disability has been defined on the NCES website (<http://nces.ed.gov>) as “a disorder in one or more of the basic psychological processes involved in understanding or using language, spoken or written, that manifest itself in an imperfect ability to listen, think, speak, read, write, spell or do mathematical calculations”. Research has shown that youth with untreated dyslexia, which is a specific learning disability, wherein individuals with average intelligence have difficulty reading, writing, and spelling, are more likely to dropout of high school and become unemployed, underemployed, or incarcerated as compared to their peers who do not have dyslexia (<http://www.ldonline.org/article/10784/>). The high school dropout rate for students with a learning disability was 36 percent compared with 14 percent of students without a learning disability in 2017-2018 (NCES, 2019). Thus, twice as many high school students with specific learning disability dropout of high school as compared to students without learning disability.

Although dyslexia has been defined as difficulty with reading, writing, and spelling, and is lifelong, discussion in this chapter has been limited to word reading difficulty of adolescents, with the exclusion of spelling and writing difficulties to ensure depth of coverage for the language-based etiology of dyslexia. Furthermore, discussion has also been limited to the adolescence phase of reading development, with the exclusion of the childhood and adulthood phases of the lifelong disability, because although the focus of instruction in middle school and high school shifts from “learning to read” to “reading to learn” as per Chall’s (1983) stages of reading development, many students with dyslexia who transition from elementary grades to middle school grades continue to have substantial difficulty with decoding and fluency which typically takes place from kindergarten through the end of third grade, the “learning to read” stages, due to their persistent phonological processing deficits. Accordingly, the more mature levels of language, vocabulary, syntactic, and background knowledge needed for “reading to learn” the new information and concepts taught in the upper elementary grades and that continue through middle and high school up into the college years often is delayed or deficient amongst adolescents with dyslexia. Thus, word reading instruction of adolescents with dyslexia is often an overlooked area of treatment, and is worthy of much need discussion, and therefore has been pinpointed as a salient of discussion in this chapter.

To reiterate, although most students in middle school and high school grades can accurately and fluently read complex words that are part of their academic curriculum, there are several students with a specific learning disability (i.e., dyslexia) who have difficulty reading words that are part of their content-area classes (Tighe & Binder, 2015; Toste, Williams, & Capin, 2017). Their inability to accurately and fluently read complex words often is the result of weakness in phonological awareness (Bruck, 1992). In other words, adolescents with dyslexia often inaccurately read complex words due to their difficulty connecting sounds of letters (i.e., phonemes) to spellings of letters (i.e., graphemes), which then adversely affects their phonological awareness (Peterson & Pennington, 2012). Difficulty with word recognition has also been attributed to weak auditory and visual processing of letter-sound sequences in

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