Chapter 7: Communication and Learning Disorders

# 7.1 Communication Disorders

## What is Language Disorder?

* Language Disorder is characterized by persistent difficulties with the acquisition or use of language that include (1) reduced vocabulary, (2) limited sentence structure, or (3) impairments in discourse. Two broad types are Late Language Emergence and Specific Language Impairment.
* Language Disorder is heritable and associated with deficits in auditory processing, rapid temporal processing, and short-term memory. It is unclear if impoverished parent–child communication is a cause or consequence of children’s language problems.
* Evidence-based treatments include discrete trial training to increase vocabulary, conversational recast training to correct language errors, and milieu training to generalize skills to home and school.

## What is Speech Sound Disorder?

* SSD is characterized by persistent difficulty with clear and articulate speech production that limits children’s communication. Examples include sound omissions, substitutions, distortions, and lisps.
* Most children with SSD continue to use immature speech production into middle childhood. Some children with the disorder have underlying phonological problems that cause them to mentally represent and process speech sounds (phonemes) incorrectly.
* Direct instruction can be used to systematically introduce, model, and reinforce correct speech production. Most youths show an 80% reduction in errors.

## What is Childhood Onset Fluency Disorder?

* Childhood-Onset Fluency Disorder (Stuttering) is a persistent problem with the normal rate, efficiency, and timing pattern of children’s speech, often characterized by sound or syllable repetitions, broken or blocked words, or tension while speaking. Problems with speech fluency cause anxiety about speaking or interfere with children’s communication.
* Stuttering is heritable and is sometimes acquired through classical conditioning, as children associate speaking with anxiety. Psycholinguistic theories suggest that stuttering is also caused by covert attempts to fix language problems.
* Speech therapies to reduce stuttering emphasize (1) adopting a soft or “easy” voice when speaking, (2) speaking at a slower rate, and (3) relaxing the throat and controlling breathing. Older children can learn mechanisms to cope with anxiety in speaking situations.

## What is Social (Pragmatic) Communication Disorder?

* Social Communication Disorder is characterized by persistent difficulties in the use of verbal and nonverbal communication in social contexts (i.e., pragmatics). Features include problems (1) greeting others and sharing information; (2) changing communication style to meet the needs of listeners in different contexts; (3) maintaining conversations or telling stories; or (4) understanding inferences, idioms, metaphors, or humor.
* Youths with Social Communication Disorder show deficits in social communication but they do not display the restrictive, repetitive patterns of behavior seen in children with ASD.
* Treatment involves helping youths initiate and maintain eye contact and conversations, develop conversational repair skills, and improve story-telling abilities. Social skills training, either in group therapy or while watching videotaped models, is also effective in improving pragmatic communication skills.

# 7.2 Learning Disabilities & Specific Learning Disorder

## What is Specific Learning Disorder?

* Specific Learning Disorder is a DSM-5 diagnosis characterized by difficulties learning or using reading, math, or writing skills. These academic skill deficits are significantly low, compared to other people of the same age, and cause impairment in school or other activities.
* Specific learning disability is a legal term used to describe problems in the basic psychological processes involved in using spoken or written language. These processing problems cause impairment in reading, math, spelling, writing, or oral language.
* The academic problems shown by children with learning disorders/disabilities are not due to sensory impairments, impoverished educational experiences, socioeconomic disadvantage, or children’s cultural/linguistic background.

## How are Learning Disabilities Identified in Children?

* Learning disabilities are usually identified in school-age children using RTI, a three-tiered system in which children receive progressively more intense, individual services to help them acquire academic skills. Failure to respond to these interventions may indicate a disability.
* RTI relies on curriculum-based assessment, the measurement of children’s academic progress toward academic benchmarks.
* Comprehensive assessment can be used to rule out alternative causes for children’s failure to respond to evidence-based instruction using RTI. In this approach, children are diagnosed with a learning disability when they show (1) normative deficits in academic skills, (2) underlying cognitive processing problems that might explain these deficits, and (3) otherwise average intelligence.

## How Common Are Learning Disabilities?

* Between 5-7.5% of school-age children have been identified as having a learning disability. Reading disabilities account for approximately 80% of youths with these conditions.
* Boys are more likely than girls to be identified with a learning disability.
* Children from minority backgrounds are more likely to be identified with a learning disability than White, non-Latino youths. These differences in identification are partially attributable to SES.

## What Causes Reading Disabilities?

* Children with basic reading problems often display poor phonemic awareness, which interferes with their ability to decode unfamiliar words. Underactivity of the left hemisphere language areas of the brain are associated with these deficits.
* Youths with reading fluency and comprehension problems often have underlying deficits in processing speed, working memory, or rapid automatized naming.
* The double-deficit model indicates that children can have problems with (1) basic word reading, (2) reading fluency and comprehension, or (3) both. Youths with double deficits are most resistant to treatment.

## What Treatments Are Effective for Children with Reading Disabilities?

* Children with reading fluency or comprehension problems caused by poor word reading skills may benefit from phonics-based instruction.
* Guided oral reading, digitally-assisted reading, and the RAVE-O program are effective at increasing the rate and accuracy of children’s reading skills.
* Interventions to improve reading comprehension for fiction often focus on teaching story grammar, that is, the components and structure of stories. Interventions for nonfiction often involve text enhancements, such as diagrams, flowcharts, or mnemonics.

## What Causes Disabilities in Written Expression?

* Youths with disabilities in written expression spend less time than their typically-developing peers planning, translating, and reviewing their writing.
* Youths with writing disabilities also produce less text, use simpler and less diverse words and sentences, and make frequent mistakes in grammar or sentence structure.

## What Treatments Are Effective for Children with Disabilities in Written Expression?

* Self-Regulated Strategy Development (SRSD) involves introducing, modeling, and reinforcing strategies for improving written expression.
* Children are explicitly taught steps to plan, implement, and evaluate the quality of their written expression and given frequent feedback as they practice their writing skills. Specific strategies depend on the type of writing.

## What Causes Math Disabilities?

* Deficits in number sense that persist into first grade predict math disabilities.
* Youths later diagnosed with math disabilities often show characteristic mistakes in counting and math calculation skills. They often rely on immature strategies to perform math computations.
* Some youths have deficits in math reasoning because of poor verbal working memory, which causes them to forget important information in story problems. Others have poor visual-spatial working memory which leads to mistakes performing computations.

## What Treatments Are Effective for Children with Math Disabilities?

* Three effective treatments for math disabilities are direct instruction, self-instruction, and mediated/assisted instruction. These strategies also improve math skills in youths without disabilities.
* Direct and self-instruction are most effective with younger children whereas mediated/assisted instruction is recommended for older children.