



**RUTGERS**

BIOMEDICAL AND  
HEALTH SCIENCES

# **Speech, Language, & Literacy Disorders in School Aged Children with Psychiatric Impairments**

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## Learning objectives

- **Explain the comorbidity between language impairments and psychiatric disturbances of school aged children**
- **Describe language and literacy deficits of school-aged children with psychiatric impairments**
- **List warning signs of language and literacy deficits in school-aged children that warrant a referral to speech language pathologists for a potential assessment**

# Developmental Language Disorder (DLD)

- Children have difficulties comprehending what is being said to them as well as expressing selves unrelated to obvious biomedical issues (e.g., ASD, HI, ID, etc.)
  - Normal development in all areas with the exception of language
- Specific Language Impairment (SLI) was the old label
- Recent name change better reflects the types of difficulties children have (Bishop, Snowling, Thompson, Greenhalgh, and The CATALISE Consortium, 2017)
  - Difficulties persist to adulthood
  - Significantly impact functioning
  - Require additional assistance
    - SLP assessment and treatment
    - Special education placements

# The term Developmental Language Disorder (DLD) should be used for children where...

1

The child has language difficulties that create barriers to communication or learning in everyday life



2

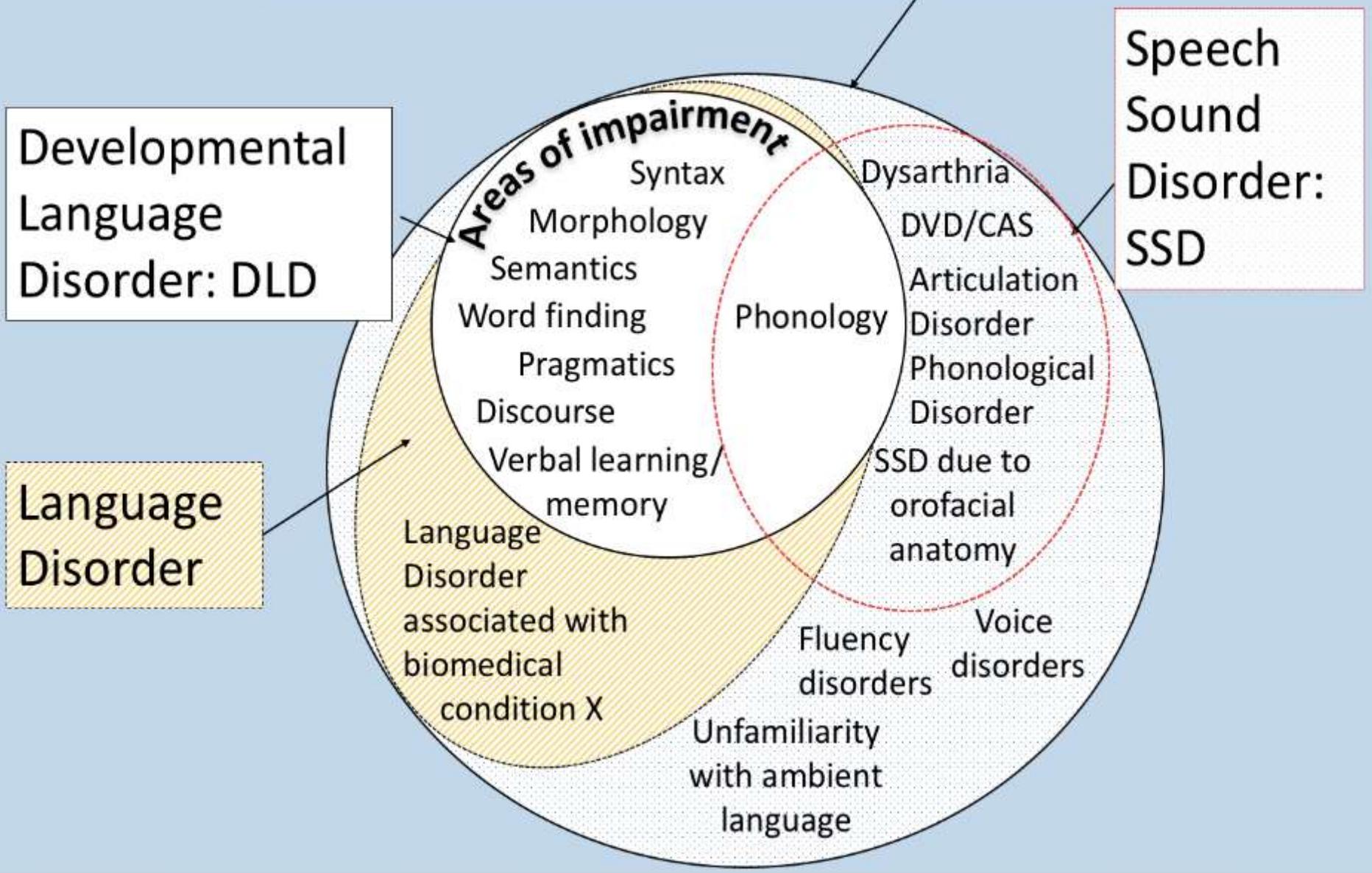
The child's language problems are unlikely to be resolved by five years of age



3

The problems are not associated with a known biomedical condition such as brain injury, neurodegenerative conditions, or chromosome disorders

# Speech, Language and Communication Needs



**Figure 2** Slightly modified version of Figure 2 in the CATALISE Phase 2 Report showing where DLD, Language Disorder, and Language Disorder associated with X, fit in the SLCN schema. Used by permission of D. V. M. Bishop.

# Language Disorder Associated with a Biomedical Condition

- Sampling of Common Pediatric Psychiatric (non autistic) Diagnoses Affecting Language Skills
- Attention and Behavior Disorders
  - ADHD
  - Oppositional Defiant Disorder
  - Conduct Disorder
- Mood Disorders
  - Depression
  - Bipolar
- Anxiety Disorders
  - Panics
  - Phobias
- Childhood Onset Schizophrenia
- Reactive Attachment Disorder

# Psychiatric Impairments and Language Disorders

- Very high comorbidity rates 37-89% (Blankenstijn, & Scheper, 2003) **depending on which study you look at**
- Children with language disorders are at risk for developing psychiatric conditions (e.g., anxiety, depression, etc.)
- Children with psychiatric diagnoses often have significant comorbid language deficits, **which may go undetected for years**
- Cohen et al, 1998 found that 40% of children between 7-14 years of age referred solely for psychiatric problems had a language impairment **that had never been suspected**
- Hollo, Wehby, & Oliver (2014) did a meta-analysis of 22 studies, which reported results of language assessments in children with emotional and behavioral disturbances, EBD, with no prior history of language impairment (LI). They found that more than 80% of these children displayed below average language performance on standardized assessments (1–2 SD below the mean on a single measure) and 46.5% of these children qualified for criteria of moderate-severe LI (>2 SD below the mean on a single measure)

## Why is this a problem?

- Children with psychiatric impairments can spend years "under the radar" without the recognition from medical and educational professionals that they present with difficulty adequately comprehending and expressing language.
- It will affect their academic functioning in school and may lead to a host of poor outcomes
  - Drop out of school
  - Incarceration
- In specialized settings (e.g., RDS) it will affect their ability to benefit from psychotherapy as adequate language abilities are critically important in order for therapy have beneficial effect on the child

# Speech Sound Disorders (SSD)

- As per Hayiou-Thomas and colleagues, 2017: “the presence of early SSD conferred a small but significant risk of poor phonemic skills & spelling at the age of 5½ & of poor word reading at the age of 8. ”
- The persistence of speech difficulties at the start of school entry is associated with poorer emergent literacy skills, and children with ‘disordered’ speech errors have poorer word reading skills
- The presence of co-occurring language deficits adversely impacts literacy skills
- Family risk of dyslexia increases risks and adversely affects outcomes
- However, SSD alone possess few or no psychiatric effects (Baker & Cantwell, 1987ab; Howlin & Rutter, 1987; Beitchman et al., 1989a; 1996a, 1996b; Toppelberg and Shapiro, 2000)

# Psychiatric Impairments and Language

- Two thirds of students with emotional disturbances experience overall or clinically significant expressive and receptive language deficits (Nelson, Benner, & Cheney, 2005)
- “Disorders of grammar, semantics, and pragmatics, but not phonology, overlap significantly with childhood psychiatric disorders. Receptive language disorders have emerged as high-risk indicators, often undiagnosed.” (Toppberg, 2000)
- Clinical Setting: More likely to evidence receptive language deficits than expressive ones (Cantwell & Baker, 1991; Cohen et al., 1993)
- School Setting: Expressive language disorders are an associated comorbid feature of externalizing ED (Walker, Ramsey, & Gresham, 2004)

## Warning signs???

- How can we recognize if the child's language abilities in the areas of listening, expression and social communication is impaired?
- Knowledge of typical language development matters for all educators!



# Psychiatric Diagnoses and Language Disorders

- Benner, Nelson, and Epstein (2002) examined 26 studies (n= 2,796) that addressed students with EBD and language deficits
  - Approx 71% of students were identified with pragmatic language deficits
  - Students with EBD had high co-occurrence rates of antisocial behavior and language deficits
- Cohen et al., 1998
  - Most common difficulties were in the areas of emotion decoding and social problem solving

# Psychiatric Diagnoses and Language Abilities

- Bryan, 1991
  - difficulties understanding another person's affective state
- Baltaxe & Simmons, 1988
  - Conversation rule violations
  - Lack of background information provision
  - Behavioral outbursts vs. use of language
  - Decreased language use for problem solving
  - Lack of appropriate communication style

# Psychiatric Diagnoses and Social Pragmatic Skills

- Hyter, 2003 found that
  - Pragmatics is the area of language most affected for students with EBD
- Aram, Ekelman, & Nation, 1984 found that
  - Pragmatic language disorders can complicate co-occurring psychiatric disorders
- Goldman, 1987 found via parental reports that
  - children with language learning deficits did not use language for problem solving (e.g., sit down and talk through problems) but instead reacted physically by throwing tantrums and by storming out of the room.

# Specific Psychiatric Diagnoses and Social Skills

- Greenberg & Fisher, 1999
  - Preschool boys with ODD had poorer vocabularies for describing affective states than TD peers
- Bishop and Baird, 2001
  - children with ADHD showed evidence of underlying difficulties in social understanding
- Gilmour et al, 2004
  - Substantial portion of children with conduct disorder have deficits in their pragmatic skills that are as severe as those of children diagnosed with ASD

# Difficulty with Detection and Recognition of Social Communication Deficits

- May be perceived as challenging behaviors
- Severe cases misdiagnosed as ODD
- Common teacher/parent complaints:
  - “Ignores” presented directions
  - Follows own agenda
  - Inappropriately “acts out”
  - Acts immaturely
  - Clueless regarding others around him

## Can they appropriately...

- Label facial expressions
- Gage moods
- Identify own feelings
- Identify other's feelings
- Initiate social interactions
- Interpret social situations
- Create and convey messages to speakers
- Relate to peers (“disability barometer”)

# Typical Language Development of School-Age Children

# Hierarchy of Language Development

- Receptive Language
  - Comprehension of words, phrases, sentences, stories
- Expressive Language
  - Speaking single words, phrases, sentences, engaging in conversations, producing stories
  - Reading
    - Words, sentences, short stories, chapter books, etc.
    - General topics
    - Domain specific topics (science, social studies, etc.)
  - Spelling
  - Writing
    - Words, sentences, short stories, essays
- Language develops along a continuum with listening comprehension and oral expression being the foundational framework for development of later more complex abilities such as reading, spelling, and writing
- Thus effective language interventions for struggling learners involve working on reading, writing, and spelling (literacy) in conjunction with listening comprehension and oral expression



## Typical Language Expectations: 6-7 years olds

- Produce coherent stories that center around a theme and contain a logical chain of events
- Able to take part in a longer conversations
  - Say things that are relevant to the conversation
  - Able to engage in multiple turns of conversation (5+)
- Speech is clear and easy to understand

## When to refer

- Child has difficulty responding appropriately to questions or instructions
- Child has difficulty speaking in longer sentences
  - Words are in the wrong order
  - Sentences are too simple
  - Immature vocabulary
- Child has difficulty maintaining a conversation
- Child can't answer problem solving questions
- Child exhibits poor social functioning
  - May be indicative of social pragmatic deficits

# Typical Language Expectations: 8-11 years of age

- Understand more and more words with multiple meanings
- Understand implied or suggested information in stories and conversations
- Understand metaphors and other abstract meanings (“it’s raining cats and dogs”)
- Listen and draw conclusions in subject area learning activities
- Form opinions based on evidence

# Typical Language Expectations: 8-11 years of age (cont)

- Be able to follow a story without looking at pictures
- Summarize main ideas of stories/messages
- Learn new words and make links between related information (evaluate)
- Relay a sequence of events or complicated stories
- Awareness of others' points of view and opinions

## When to refer

- If the child has difficulty following instructions without prompting
- If the child has visible difficulties with memory
- If the child has difficulty processing information
- If the child is not able to follow a message or a story without repetitions or questions from staff
- If the child has limited vocabulary

## When to refer cont.

- If the child has difficulty understanding questions/problem solving
- If the child takes all sayings literally
- If the child has difficulty following a shared topic in a conversation
  - only want to talk about things that interest them
- Many errors in the grammar of spoken speech
- Use non specific words like 'thing' and 'stuff' a lot

## Typical Language Expectations: 12-13 years old

- Summarize main ideas of stories/messages
- Can discuss abstract concepts and ideas that are not within their personal experience (e.g., blood circulation in the heart)
- Can use language to manipulate the behaviors, feelings and attitudes of other people
- Can transition from topic to topic with ease
- Can adjust vocabulary and modify language style (e.g., the rate of speech or the complexity of the message) to accommodate different listeners

## What to ask?

- Do you have trouble understanding what teachers or other kids are telling you?
- Do you have trouble telling what you want to say to others?
- How do you feel when you don't understand others?
- How do you feel when others don't understand you?
- Limitations:

## What to ask?

- Ask the child (7+ years) to produce a personal narrative
- Require the speaker to organize an account/ recount of past experiences
- Effective ways to tax the system due to unplanned discourse abilities (Hadley, 1998; Hughes, 2001)
- Require ability to make the story interesting to listeners (Hughes, 2001)

## More on Personal Narratives

- Narrative abilities are "highly relevant for the child psychiatry population as means for both psychotherapeutic evaluation (Emde, Wolf, & Oppenheim, 2003) and intervention (Angus & McLeod, 2004; Chaika, 2000; Gardner, 1993)".
- Can they maintain a topic of their story
- Did they provide enough information
  - Facts/details
  - Are they capable of rendering an opinion?
- Can they put events in order without confusing the listener?
- Are they using pronouns to refer to people vs. labeling everyone he/she or stuff
- Is their story fluent or does it contain a lot of fillers?

# Warning Signs of Literacy Deficits in Young Children

- Documented history of language impairment
- Receipt of therapy services from a very early age
  - Early intervention
  - Preschool-disabled eligibility
- Absence of early-onset linguistic deficits but presence of early-onset literacy difficulties
  - Difficulty remembering nursery rhymes and songs
  - Trouble remembering the letters of the alphabet
  - Trouble recognizing simple rhyming words, etc.
    - Even without a pertinent family history of literacy disabilities it may be important for a child to undergo an early literacy assessment in order to determine whether intervention is warranted

# Warning Signs of Reading Difficulties in Preschool Children

- Can't recall/produce basic nursery rhymes
- Has significant trouble learning the letters of the alphabet
  - May not even recognize letters in own name
- Can't recognize rhyming words (e.g., fat cat sat on a mat)
- Has trouble learning new words
- Poor memory for names
- Mishears and mispronounces novel words and/or names
- Social Immaturity

# Warning Signs of Reading Difficulties in School-Aged Children (cont.)

- Difficulty engaging in phonological awareness tasks
- Difficulty reading short texts (e.g., guesses words, omits, adds sounds, articles, morphological endings, etc.)
- Letter reversals
- Poor reading fluency skills
- Reads below grade level
- Poor morphological awareness skills
  - Can't recognize roots of words
  - Doesn't realize that prefixes and suffixes change words rather than making completely different words (e.g., 'struct')
- Poor reading comprehension abilities
- Poor spelling abilities

# Warning Signs of Reading Difficulties in School-Aged Children

- K-1<sup>st</sup> grade
  - Guesses words instead of attempting to sound them out
  - Has difficulty counting words in sentences and breaking words into syllables
  - Doesn't wish to engage in reading tasks
  - Difficulty/Cannot sound out CVC words (e.g., bat)
  - Difficulty/Cannot recognize first/last sounds in short words (e.g., map)
  - Has trouble associating letters with sounds

## Conclusion

- (Cohen, 2001)
  - It is important not to ascribe communication difficulties to a psychologic process, such as inattention or emotional distress, when they should be attributed to a **primary language impairment (now known as DLD)**
- If left untreated language deficits persist and worsen over time due to which children with DLD have relatively poor outcomes in childhood through to late adolescence
- If intervention is provided earlier → results are more effective

## Conclusion (cont)

- Differential diagnosis is needed in order to rule out/confirm DLD+x
  - Is their psychiatric status impacted by “hidden” language deficits?
- Most effective approaches to identification and treatment are collaborative between
  - Psychiatrists
  - Psychotherapists
  - Speech Language Pathologists
  - Caregivers

# Let's Talk About it?

## Questions??

## Comments?

## Contact Information

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